

# ***APPENDICES***

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# ***APPENDIX A***

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***BIOLOGICAL ASSESSMENT SEMINOLE TRIBE OF FLORIDA FEE-  
TO-TRUST***



# BIOLOGICAL ASSESSMENT SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST

**JULY 2011**

PREPARED FOR:

U.S. Department of the Interior  
Bureau of Indian Affairs  
Eastern Regional Office  
545 Marriott Drive, Suite 700  
Nashville, TN 37214



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## 1.0 INTRODUCTION

This Biological Assessment (BA) has been prepared for the Seminole Tribe of Florida fee-to-trust project (Proposed Project) in Broward County, Florida in support of an application to the U.S. Bureau of Indian Affairs (BIA). The BIA's proposed action is to place 45± acres of land into federal trust for the Seminole Tribe of Florida (Tribe). The BIA and the U.S. Fish and Wildlife Service (USFWS) may use the information in this BA to determine if effects to federally listed species may occur as a result of the Proposed Project.

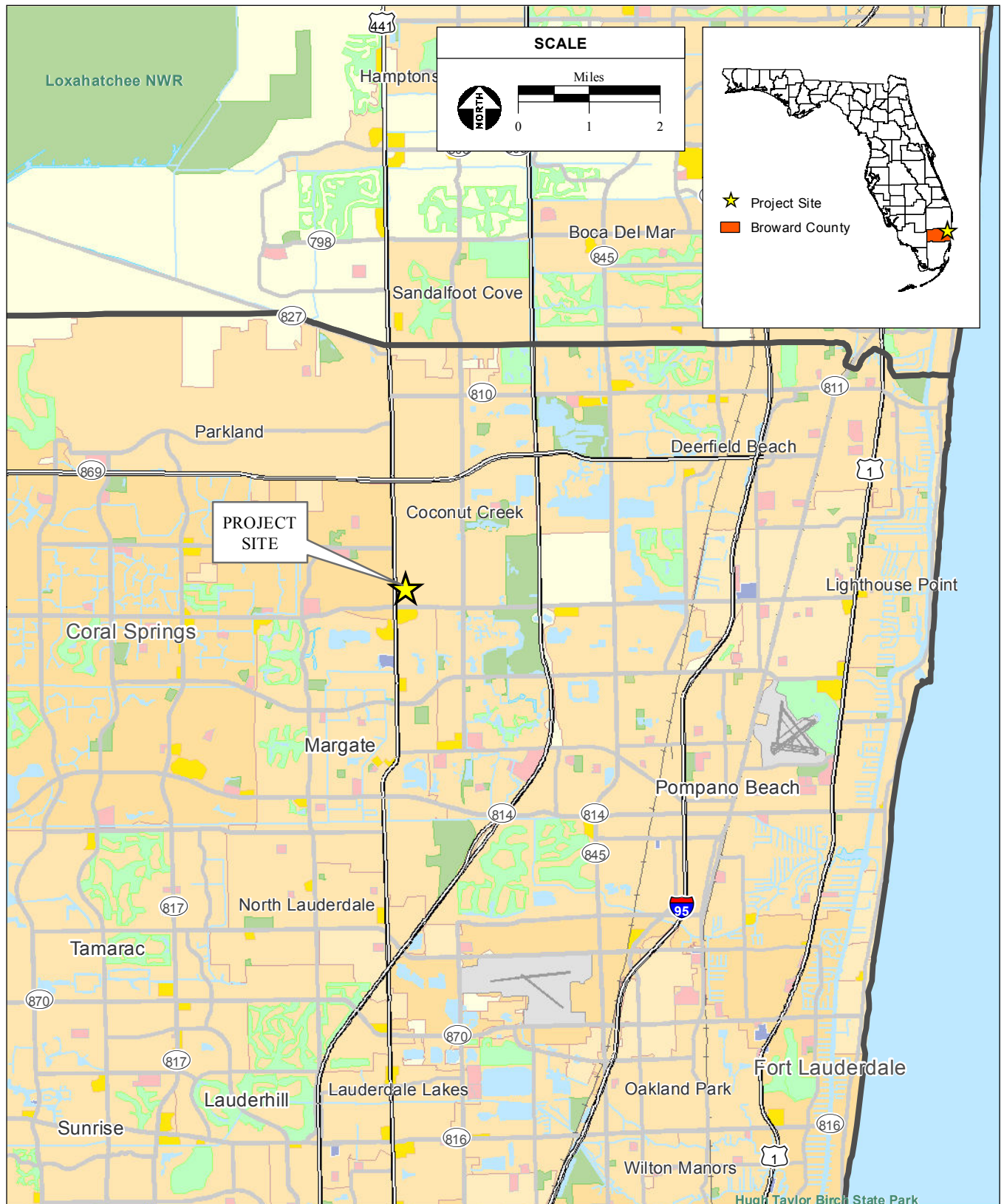
The purpose of this BA is to review the proposed action in sufficient detail to determine the extent to which it may affect any of the federally threatened, endangered, or proposed species and designated or proposed critical habitats. The following information is provided to comply with statutory requirements to use the "best scientific and commercial data" available when assessing the risks posed to listed and/or proposed species and designated and/or proposed critical habitat by federal actions. This BA was prepared in accordance with legal requirements set forth under Section 7 of the FESA (16 U.S.C. 1536 (c)) concerning the effects of the proposed action.

In order to fulfill its purpose, this BA:

- Characterizes the habitat types present within the action area;
- Evaluates the potential for the occurrence of federally endangered, threatened, or proposed species within the action area;
- Assesses the potential for the proposed action to adversely affect federally endangered, threatened, or proposed species; and
- Recommends mitigation measures designed to avoid or minimize project-related effects.

## 2.0 PROJECT LOCATION

The approximately 45-acre fee-to-trust property (project site) is located within the City of Coconut Creek (Coconut Creek), Broward County (County), Florida, adjacent to the Tribe's existing trust property (Tract 65) (**Figure 1** and **Figure 2**). The project site consists of lands presently owned by the Tribe, including a portion of Northwest 40<sup>th</sup> Street. The project site includes Commerce Center of Coconut Creek Tracts C, D, G, H, I, and the western portion of Tract B (**Figure 3**). Tract 65, the Tribe's existing trust property, contains the existing Coconut Creek Casino; this tract is not included as part of the Proposed Project.

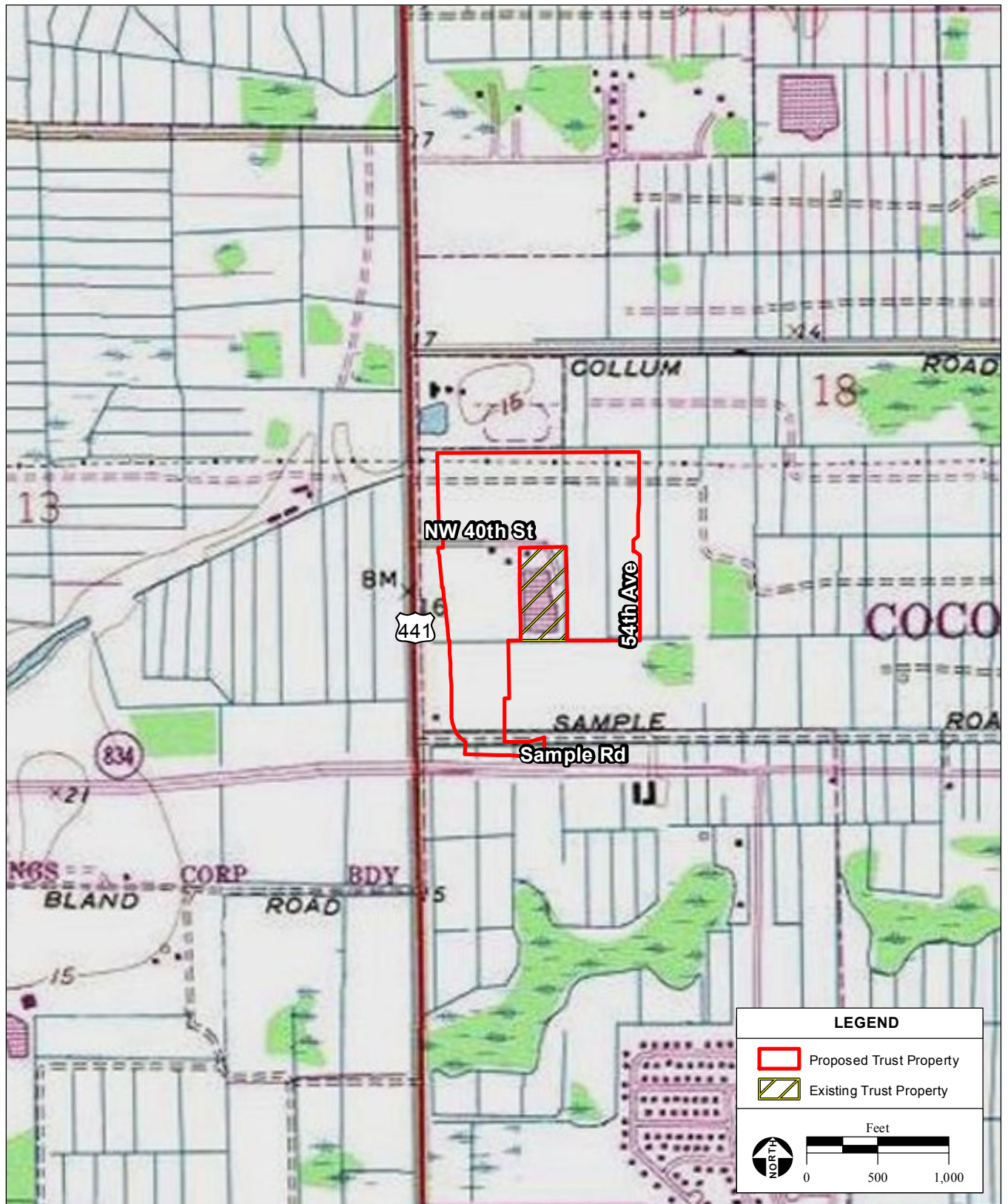


SOURCE: StreetMap North America, 2009; AES, 2011

Seminole Fee to Trust Project BA / 210520 ■

**Figure 1**  
Regional Location





SOURCE: "West Dixie Bend, FL" USGS 7.5 Minute Topographic Quadrangle, T48S R42E, Section 18, Talahassee Baseline & Meridian; AES, 2011

Seminole Fee to Trust Project BA / 210520 ■

**Figure 2**  
Site and Vicinity







## 2.1 SUMMARY OF CONSULTATION TO DATE

The BIA is the lead agency for the Proposed Project. As such, the BIA will receive this BA as an attachment to the Environmental Impact Statement (EIS) for the Proposed Project. AES biologists queried the USFWS South Florida Ecological Office online database of federally listed and candidates species in Broward County to initiate informal consultation (e.g., baseline research) for the Proposed Project and preparation of this BA (USFWS, 2010a; **Appendix A**).

The USFWS previously issued a letter dated October 31, 2005 in regards to the Environmental Assessment (EA) previously prepared in support of the Tribe's Fee-To-Trust (FTT) application (USFWS, 2005). This EA included the same parcels as those evaluated under the current Proposed Project. Therefore, the recommendations provided by the USFWS and the BIA concerning the assessment of impacts to the federally endangered wood stork (*Mycteria americana*) were taken into consideration in the development of this BA.

## 3.0 PROJECT DESCRIPTION

It is currently expected that three development alternatives will be analyzed in the EIS, including a development alternative that does not constitute a federal action, as development would occur without the land being taken into federal trust. These alternatives include:

- **Alternative A - Proposed Project with Coconut Creek Agreement**  
Sub-Alternative A-1 – Proposed Project with no Coconut Creek Agreement
- **Alternative B- Reduced Intensity Project**
- **Alternative C – No Federal Action**

Site plans for Alternatives A, Sub-A-1, and B are provided as **Figures 4a, 4b, and 4c**, respectively. These alternatives are described in detail in Section 2.0 of the EIS.

## 3.1 PURPOSE AND NEED

Implementation of the Proposed Action would assist the Tribe in meeting the following objectives:

- Strengthen the socioeconomic status of the Tribe by providing an augmented revenue source that could be used to fund the tribal government; fund a variety of social, housing, governmental, administrative, educational, health and welfare services to improve the quality of life of tribal members; and provide capital for other economic development and investment opportunities;



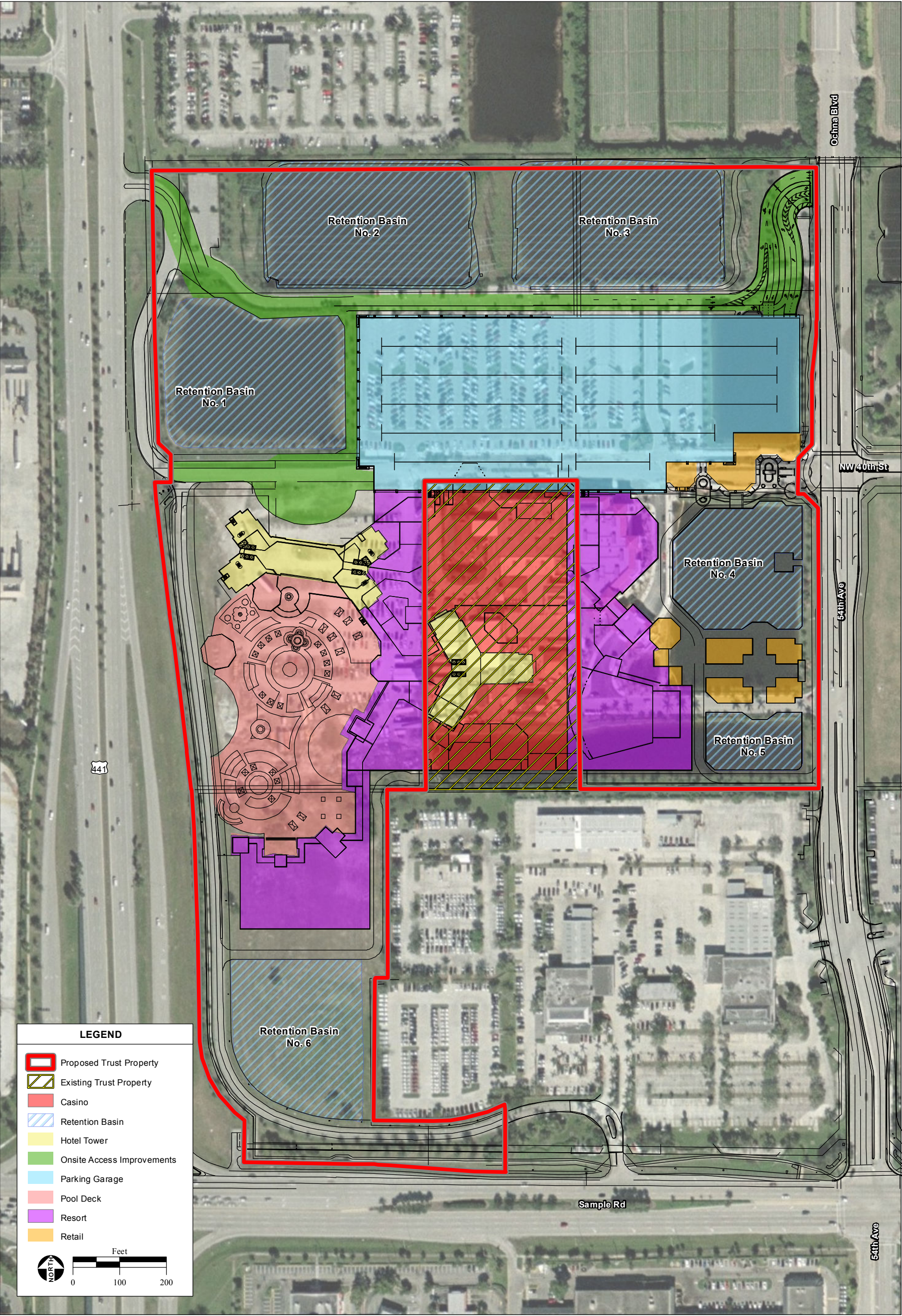
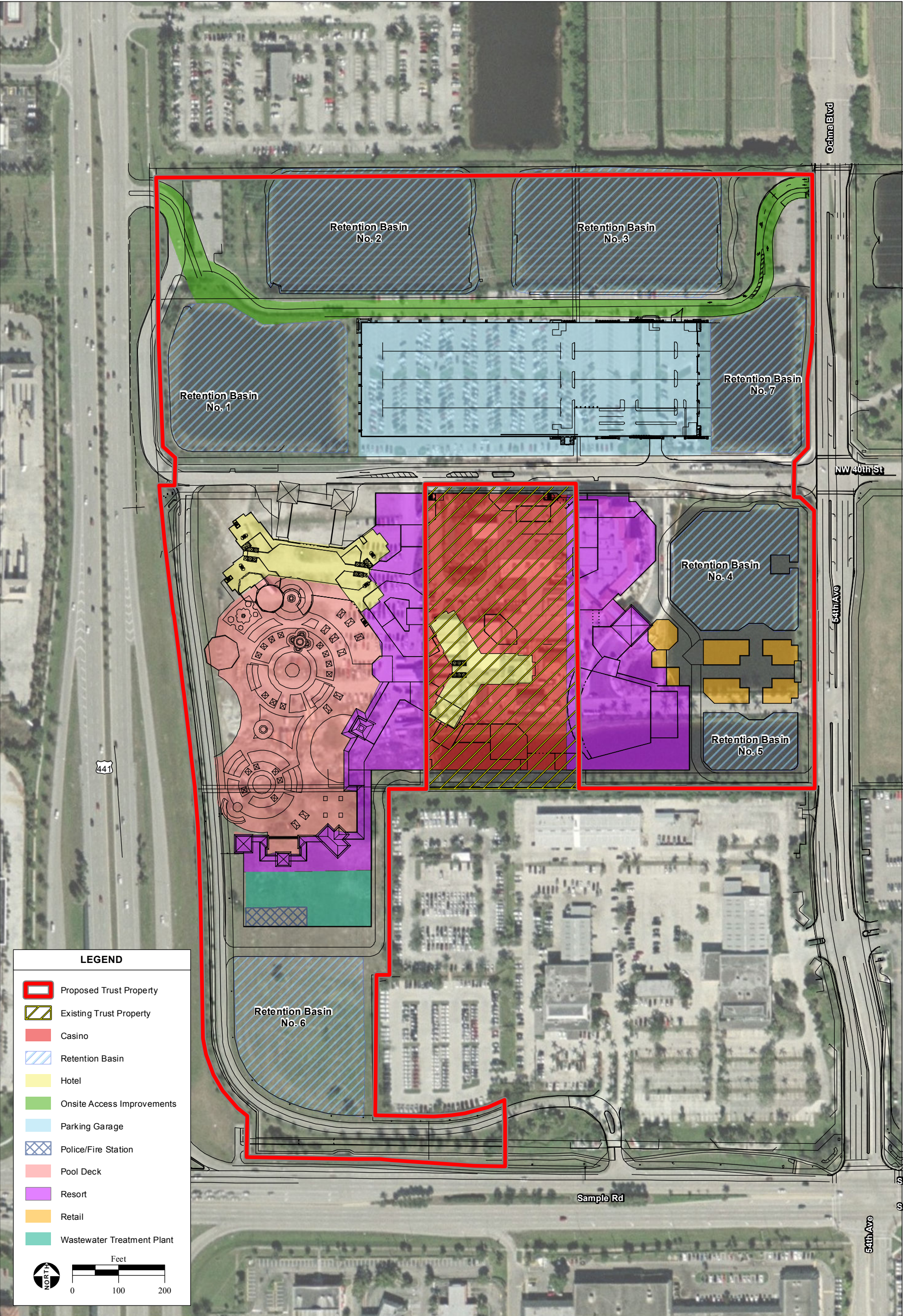


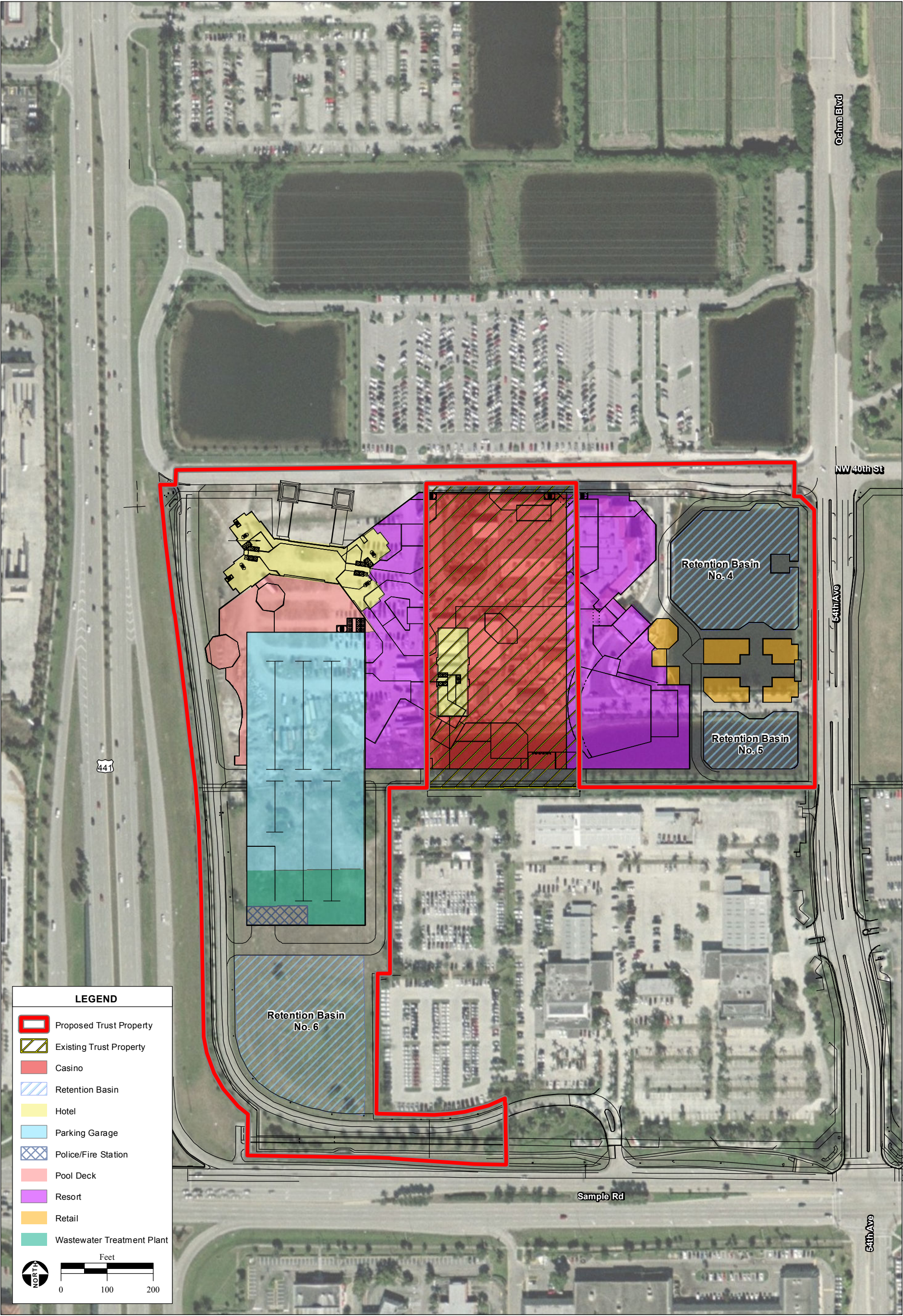
Figure 4a

Alternative A - Proposed Project With Coconut Creek Agreement











- Increase the ability for the Tribe to make donations to charitable organizations and governmental operations, including local educational institutions;
- Fund local governmental agencies, programs, and services; and
- Allow the Tribe to diversify its holdings over time, so that it is no longer dependent upon the Federal or State governments or even upon gaming to survive and prosper.

## 4.0 REGULATORY SETTING

This section summarizes the applicable federal regulations regarding biological resources within the project site. The regulatory context of the Proposed Project is derived from federal laws that govern the protection of biological resources. Fundamental laws included within the scope of this BA are, for example, the Federal Endangered Species Act (FESA) and the Clean Water Act (CWA).

### FEDERAL ENDANGERED SPECIES ACT

The USFWS and the National Marine Fisheries Service (NMFS) implement the FESA (16 USC Section 1531 *et seq.*). Under the FESA, federally listed threatened and endangered species (50 CFR Section 17) are protected from take (defined as direct or indirect harm) unless a Section 10 incidental take permit is granted or a Section 7 consultation and a Biological Opinion (BO) with incidental take provisions is provided. This BA is intended for the BIA to facilitate consultation with the USFWS under FESA. Pursuant to the requirements of the FESA, agencies reviewing proposed projects within their jurisdictions must determine whether any federally listed species have the potential to occur within a proposed project site and if the proposed project would have any potentially significant impacts upon such species. Under the FESA, habitat loss is considered an impact to a listed species. These agencies are also required to determine whether the project is likely to jeopardize the continued existence of any species proposed for listing under the FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536 *et seq.*). Project-related impacts to these species, or their habitats, would be considered significant and require mitigation. The USFWS also maintains a list of candidate species, which are considered during environmental review, though they are not formally protected under the FESA. Candidate species may become proposed for official listing.

Critical habitat is defined in Section 3 of the FESA as (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the FESA, on which are found those physical and biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species (16 USC Section 1531 *et seq.*).

## WETLANDS AND OTHER WATERS OF THE U.S.

The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S., including wetlands, under Section 404 of the Clean Water Act (CWA). Section 404 regulates the discharge of dredged and fill material into waters of the U.S. The USACE requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters and/or discharging dredged or fill material into waters below the ordinary high water mark (OHWM). Wetlands and other water features that lack a hydrologic connection to navigable waters of the U.S. and that lack a nexus to interstate and foreign commerce are not regulated by the CWA and do not fall under the jurisdiction of the USACE. Such features are called “isolated” (DOE, 2003).

Waters of the U.S. are defined as “*All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters*” [Section 404 of the CWA; 33 Code of Federal Regulations (CFR) Part 328]. The limit of USACE jurisdiction for non-tidal waters (including non-tidal perennial and intermittent watercourses and tributaries to such watercourses) in the absence of adjacent wetlands is defined by the OHWM.

The OHWM is defined as “*The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas*” (Section 404 of the CWA; 33 CFR Part 328).

Wetlands are defined as “*Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions*” (Section 404 of the CWA; 33 CFR Part 328).

The USACE and EPA issued the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (hereafter, “USACE JD Guidelines”) on May 30, 2007 to provide guidance based on the Supreme Court’s decision regarding *Rapanos v. United States* and *Carabell v. United States* (Rapanos decision) [Rapanos vs. U.S., No. 04-1034 (June 19, 2006) and *Carabell v. U.S.*, No. 04-1384 (September 27, 2004)] (USACE, 2007). The Rapanos decision provides standards that distinguish between traditional navigable waters (TNWs), relatively permanent waters (RPWs) with perennial or seasonal flows, and non-relatively permanent waters (non-RPWs). Wetlands and non-TNWs adjacent to TNWs are subject to CWA jurisdiction if: the water body is relatively permanent, or if a water body abuts or is tributary to a RPW, or if a water body, in combination with all wetlands adjacent to that water

body, has a significant nexus with TNWs. The significant nexus standard will be based on evidence applicable to ecology, hydrology, and the influence of the water on the “chemical, physical, and biological integrity of downstream traditional navigable waters” (USACE, 2007). Isolated wetlands are not subject to CWA jurisdiction based on the Supreme Court’s decision regarding the Solid Waste Agency of Northern Cook County (SWANCC decision) (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, No. 99-1178, January 9, 2001) (DOE, 2003).

In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not defined as waters of the U.S. because they are not tributaries or they do not have a significant nexus to downstream TNWs (45, 48, and 51 CFR subsections 62732, 62747, 21466, 21474, 41206, and 41217).

### **MIGRATORY BIRD TREATY ACT**

Most bird species are protected under both federal and state regulations, especially those that are breeding, migratory, or of limited distribution. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703-712) federally listed (50 CFR Section 10), migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting cycle. As such, any potential project-related disturbances must be reduced or eliminated during the nesting cycle.

### **BALD AND GOLDEN EAGLE PROTECTION ACT**

The Bald Eagle Protection Act was originally enacted in 1940 to protect bald eagles and was later amended in 1962 to include golden eagles (16 USC Subsection 668-668). This act prohibits the taking or possession of and commerce in bald and golden eagles, parts, feathers, nests, or eggs with limited exceptions where expressly allowed by the Secretary of the Interior. The definition of take includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. Bald eagles may not be taken for any purpose unless a permit is issued prior to the taking. Activities which can be authorized by permit are: scientific collecting/research, exhibition, tribal religion, depredation, falconry, and the taking of inactive golden eagle nests, which interfere with resource development or recovery operations. The statute imposes criminal and civil sanctions as well as an enhanced penalty provision for subsequent offenses.

## **5.0 METHODOLOGY**

For the purposes of this BA, the project site is defined as the entire 45± acres. The action area is the terrestrial and aquatic habitats within the project site and adjacent roadways that occur within the Proposed Project footprint (including Alternatives A, A-1, B, and C).

## 5.1 PRELIMINARY RESEARCH

AES biologists reviewed the following resources prior to conducting a field survey of the project site:

- Aerial photographs of the project site,
- U.S. Geological Survey (USGS) “West Dixie Bend, Florida” 7.5-minute quadrangle (USGS, 1984),
- Online Soil Survey of Broward County, Florida (NRCS, 2010),
- USFWS list of federally listed special-status species with the potential to occur within or be affected by projects in Broward County, Florida (USFWS, 2010a) (**Appendix A**),
- EA dated November 2008 (BIA, 2008), and
- USFWS letter dated October 31, 2005 (**Appendix E**).

## 5.2 FIELD SURVEYS AND ANALYSIS

A reconnaissance-level field survey of the project site was performed by AES biologist Jessica Griggs on September 15, 2010. During the survey, fauna and flora were noted and identified to the lowest possible taxon. Habitat types occurring within the project site were characterized and evaluated for their potential to support regionally occurring federally listed species. Habitat types, potentially jurisdictional water features, and other biologically sensitive features were recorded using global positioning system (GPS) technology or evaluated using aerial photography.

Current uses on the project site include paved parking areas, roads, and retention ponds. There are two retention ponds for stormwater collection located on the east and south portions of the site. Four additional retention ponds surround the northern parking lot and northern boundary of the project site. The southwest corner of the project site is bounded by Sample Road and Highway 441. This area is currently a paved parking lot. A commercially developed area outside of the project site to the south contains a car dealership.

## 5.3 REGIONALLY OCCURRING FEDERALLY LISTED SPECIES

A complete list of the regionally occurring, federally listed and candidate status species for Broward County, as listed by the USFWS, is included as **Appendix A**. The list contains 27 species, specifically: 4 mammal species, 7 reptile species, 8 bird species, 1 coral species, 1 fish species, 4 plant species, and 2 invertebrate species (**Appendix A**). An analysis to determine which of these federally listed and candidate species have the potential to occur within the project site was conducted. The habitat requirements for each federally listed and candidate species were assessed and compared with the type and quality of habitats observed onsite during the field survey. Regionally occurring federally listed or candidate species were eliminated from further analysis based on factors such as: the project site was outside the known elevation range and/or geographic distribution, the project site lacked suitable habitat and/or soil/substrate, or because federally listed plants were not observed within suitable habitat within



the species' blooming season.

A review of onsite conditions and habitat requirements for each of the 27 listed species concluded that there is no suitable habitat for any of these species on the project site. The rationales as to why these species were determined not to have the potential to occur within the project site are summarized in **Appendix B**. For this reason, these species are not further discussed in this BA.

However, as mentioned in **Section 2.1**, previous consultation with USFWS in their letter dated October 31, 2005, indicated that the project site is located within a core foraging area for six wood stork nesting colonies (USFWS, 2005). Therefore, for this species in particular, an in-depth discussion and analysis of the potential for wood stork to occur within the project site is presented in **Section 8.0**.

## 6.0 ENVIRONMENTAL SETTING

The project site is located in the City of Coconut Creek in Broward County, Florida. The Atlantic Ocean is roughly 7.5 miles to the east and the city of Miami is located approximately 40 miles to the south. Land uses in the vicinity include moderate to dense commercial and residential areas. The surrounding region is highly developed. The topography of Coconut Creek is essentially flat with natural ground elevations ranging from 12 to 16 feet above mean sea level (City of Coconut Creek, 2007).

The regional climate is hot during the summer with temperatures around 80 to 90 degrees Fahrenheit (F). The winters are generally mild with temperatures in the mid 60s. The warmest month of the year is August, which has an average high temperature of 92 °F. The coldest month of the year is January with an average low temperature of 58 °F. Temperature variations between night and day tend to be fairly limited during the summer, with an average difference of only 17 degrees between the high and low daily temperatures. Similarly, during the winter, daily high and low temperature differences are around 19 degrees F. The average annual precipitation at Coconut Creek is 57 inches. The summer months tend to be wetter than the winter months and the wettest month of the year is June, which has an average rainfall of 7.3 inches (IDcide, 2011).

Because the project site is highly developed, terrestrial wildlife habitat is limited. Landscaped areas dominated by ornamental (cultivated) and non-native species comprise the majority of the green space interspersed throughout the grounds. Common ornamental and non-native species identified in within the project site during the field survey included: Trumpet tree (*Tabebuia* sp.), Coco plum (*Chrysobalanus icaco*), Earleaf acacia (*Acacia auriculiformis*), Bougainvillea (*Bougainvillea* sp.), and purple fountain grass (*Pennisetum setaceum* 'Rubrum'). A comprehensive list of all plant species observed within the project site is included as **Appendix C**.

## 6.1 SOILS

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) online Soil Survey for Broward County (NRCS, 2010), identifies three soil types that have been mapped within the project site. These soil types include: Basinger fine sand (4); Immokalee fine sand (15); and Margate fine sand (19). All three of these soils exhibit hydric characteristics as listed on the NRCS' List of Hydric Soils in Broward County (NRCS, 2011). A map of these soil types is provided as **Figure 5**. Characteristics of each soil type are described below.

### ***BASINGER FINE SAND SERIES***

As noted above, Basinger fine sand (4), 0 to 2 percent slopes, exhibits hydric characteristics (NRCS, 2011). This soil is primarily found in drainageways on marine terraces within linear or concave landscapes. The parent material is composed of sandy marine deposits with a shallow depth to water table of approximately 0 to 10 inches. The depth to a restrictive geologic feature is 80 inches. This soil is classified as poorly drained and it has a low available water capacity of approximately 5.4 inches (NRCS, 2010).

### ***IMMOKALEE FINE SAND SERIES***

Similar to the Basinger fine sand series, the Immokalee fine sand series (15) exhibits hydric characteristics and is commonly found in flatwoods on marine terraces (NRCS, 2010; 2011). The depth to a restrictive geologic feature is 80 inches. This soil is classified as poorly drained with a shallow depth to water table of approximately 6 to 18 inches. The underlying parent material is sandy marine deposits. The available water capacity of this soil is low at approximately 5.4 inches (NRCS, 2010).

### ***MARGATE FINE SAND SERIES***

The Margate fine sand (19) is similar to the Basinger and Immokalee fine sands described above. This soil is known to exhibit hydric characteristics and it occurs on drainageways on marine terraces (NRCS, 2010; 2011). The parent material of this soil is sandy marine deposits over limestone. The depth to water table is 0 inches. In comparison, the depth to a restrictive geologic feature is relatively shallow at 20 to 40 inches to lithic bedrock. This soil is known to occasionally pond; further, the available water capacity is very low at approximately 1.8 inches (NRCS, 2010).

## 6.2 HABITAT TYPES

Terrestrial habitats observed within the project site include developed and ruderal/disturbed. These habitats are described below. Aquatic habitats located within the project site include manmade retention ponds and a manmade seasonal wetland. Habitat types within the project site are illustrated in **Figure 6**. A summary of the approximate acreages of the terrestrial and aquatic habitat types identified within the project site is provided in **Table 1**. Photographs of representative habitat types found within the project site are illustrated in **Figures 7 and 8**.



**TABLE 1**  
SUMMARY OF HABITAT TYPES WITHIN THE PROJECT SITE

	Habitat Type	Acres <sup>1</sup>	Percent Area
<b>Terrestrial Habitats</b>	Developed	26.47	58.8
	Ruderal/Disturbed	5.87	13.02
<b>Aquatic Habitats</b>	Stormwater retention pond	12.47	27.7
	Manmade seasonal wetland	0.22	0.51
	<b>TOTAL</b>	<b>45.03</b>	<b>100.03</b>

NOTE: <sup>1</sup>Data rounded to two decimal places. Acreages of habitat features are approximate.  
SOURCE: AES, 2011.

### ***DEVELOPED***

Developed land is the predominant feature on the project site. Facilities associated with the off-site casino and paved parking areas constitute the majority of the current land uses within the project site (**Figure 6**). Limited wildlife habitat is available in these areas. The only onsite vegetation is located in landscaped areas immediately adjacent to the existing facilities, parking areas, or paved roads. These landscaped areas included many non-native or cultivated shrub species as well as some native tree species. Examples of plant species observed in the developed areas included: bushy bluestem (*Andropogon glomeratus*), red maple (*Acer rubrum*), saw palmetto (*Serena repens*), Florida royal palm (*Roystonea regia*), coco plum (*Chrysobalanus icaco*), trumpet tree (*Tabebuia* sp.), southern live oak (*Quercus virginiana*), and earleaf acacia (*Acacia auriculiformis*). Representative photographs of this habitat type are found in **Figures 7 and 8**.

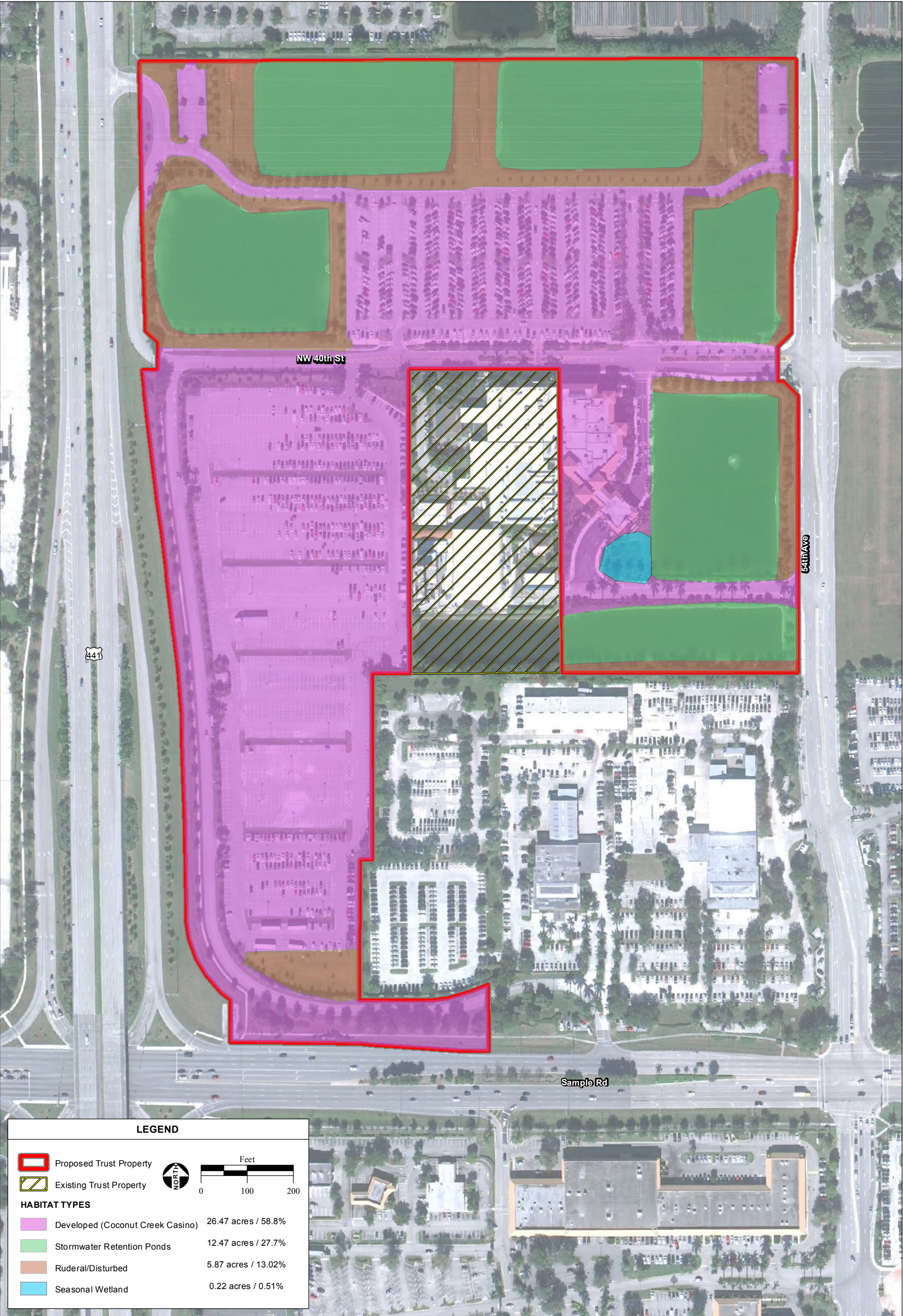
### ***RUDERAL/DISTURBED***

Ruderal/disturbed habitat includes areas that are highly disturbed by human activities. These areas include the grassy margins of the onsite retention ponds, which are routinely mowed. Additionally, the landscaped areas surrounding the existing facilities, parking areas, and onsite roads, are regularly trimmed and maintained. Plant species observed in these areas included Johnson grass (*Sorghum halepense*), Bermuda grass (*Cynodon dactylon*), red maple, saw palmetto, Florida royal palm, and coco plum. Representative photographs of this habitat type are found in **Figures 7 and 8**.

### ***STORMWATER RETENTION PONDS***

The existing on-site stormwater drainage system is comprised of six retention ponds, culverts, and piping for the conveyance of stormwater off-site. The system serves to collect, convey, attenuate, and discharge runoff while meeting the required water quality and allowable discharge rates established by the existing Master Permit (No. 06-00551-S) issued by the Cocomar Water Control District (Keith and Schinars, 2008). The manmade retention ponds are regularly maintained. The grassy banks surrounding the





**Figure 6**  
Habitat Types





**PHOTO 1:** View west of northern retention basins 2 and 3 from the northeast corner of the project site (Tract G).



**PHOTO 3:** View east of retention basin 4 located to the east of the casino entrance (Tract D).



**PHOTO 2:** View east of the southern linear retention basin to the south of the casino (Tract 65).



**PHOTO 4:** View west of the manmade seasonal wetland (Tract D).



**PHOTO 5:** View east of the stormdrain in the manmade seasonal wetland (Tract D).



**PHOTO 7:** View north of retention basin 1 in Tract H.



**PHOTO 6:** View east of the manmade seasonal wetland with retention basin 4 located in the background (Tract D).



**PHOTO 8:** View northwest of retention basin 1 in Tract H.



retention ponds contain Bermuda grass (*Cynodon dactylon*) and Johnson grass (*Sorghum halepense*) and are regularly mowed. Vegetation is regularly removed from the bottom of the ponds to enhance functionality for use in stormwater retention. The retention ponds are relatively uniform with steep sides and depths ranging between 4 to 6 feet. At the time of the site visit, posted signs prohibiting fishing and swimming were noted. The two northernmost ponds have an approximate size of 245 feet by 430 feet as noted during the site visit. The two ponds located immediately to the east and west of the northern parking area are smaller in size, at approximately 370 feet by 330 feet (for the western pond) and 170 feet by 275 feet (for the eastern pond). The retention pond located directly to the east of the casino entrance measures approximately 375 feet by 265 feet. The long, rectangular pond to the south of the casino on Tract D is approximately 785 feet by 105 feet. Representative photographs of the retention ponds are found in **Figures 7 and 8**.

At the time of the site visit, no fish or invertebrates were observed in the water edges of the retention ponds. However, several wading birds were observed along the banks of the two northern retention ponds, to the north of the upper parking lot. These bird species included: little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), and snowy egret (*Egretta thula*). The presence of waterfowl may indicate that small fish or insects inhabit these northern ponds. An osprey (*Pandion haliaetus*) was observed soaring above the project site, but it did not perch in any of the onsite trees or hunt within the retention ponds. The retention pond located on Tract D to the east of the casino's main entrance contains a large fountain in the center, which re-circulates water within the pond. A list of all wildlife species identified during the field visit is included as **Appendix C**.

#### **MANMADE SEASONAL WETLAND**

There is one manmade seasonal wetland located on Tract D. This seasonal wetland was created as part of the overall landscaping design for the adjacent casino; as a result, non-native and native plant species are present in this area. At the time of the September 15, 2010 site visit, there was ponded water within the wetland. The seasonal wetland is regulated by a pump that is located between the two larger retention ponds directly to the east and south of the wetland. In this way, water levels in the wetland are mechanically maintained to mimic natural conditions. There were two drains located within the wetland. One was a steel grate on the ground surface and the other was raised on a 2 foot high concrete box. Mulch and ornamental plants for landscaping purposes surrounded the wetland area. At the time of the site visit, the soils were saturated within the upper 5 inches. The soil within the wetland was a clay loam. The primary hydric soil indicator for the soil sample was Muck Presence (A8) (LRR U) and the soil was noted to have a greasy texture (USACE, 2008; **Appendix D**). Soil in the surrounding landscaped area (upland) was observed to be primarily fill material. Primary wetland hydrology indicators included the presence of Surface Water (A1), High Water Table (A2), and Inundation Visible on Aerial Imagery (B7) (USACE, 2008; **Appendix D**). Native plant species observed within the wetland included: arrow arum (*Peltandra virginica*), common water nymph (*Najas guadalupensis*), pickerelweed (*Pontederia cordata*) and southern cattail (*Typha domingensis*). Non-native plant species included Egyptian papyrus (*Cyperus*

*papyrus*) and swamp rose mallow (*Hibiscus grandiflorus*). Photographs of the seasonal wetland are included in **Figure 8**.

### **6.3 NATIONAL WETLANDS INVENTORY**

The USFWS National Wetlands Inventory (NWI) was used to detect any previously mapped aquatic features within the study area (USFWS, 2011). There were no previously mapped wetland features identified by the NWI within the project site. The NWI map of the project site is presented in **Figure 9**.

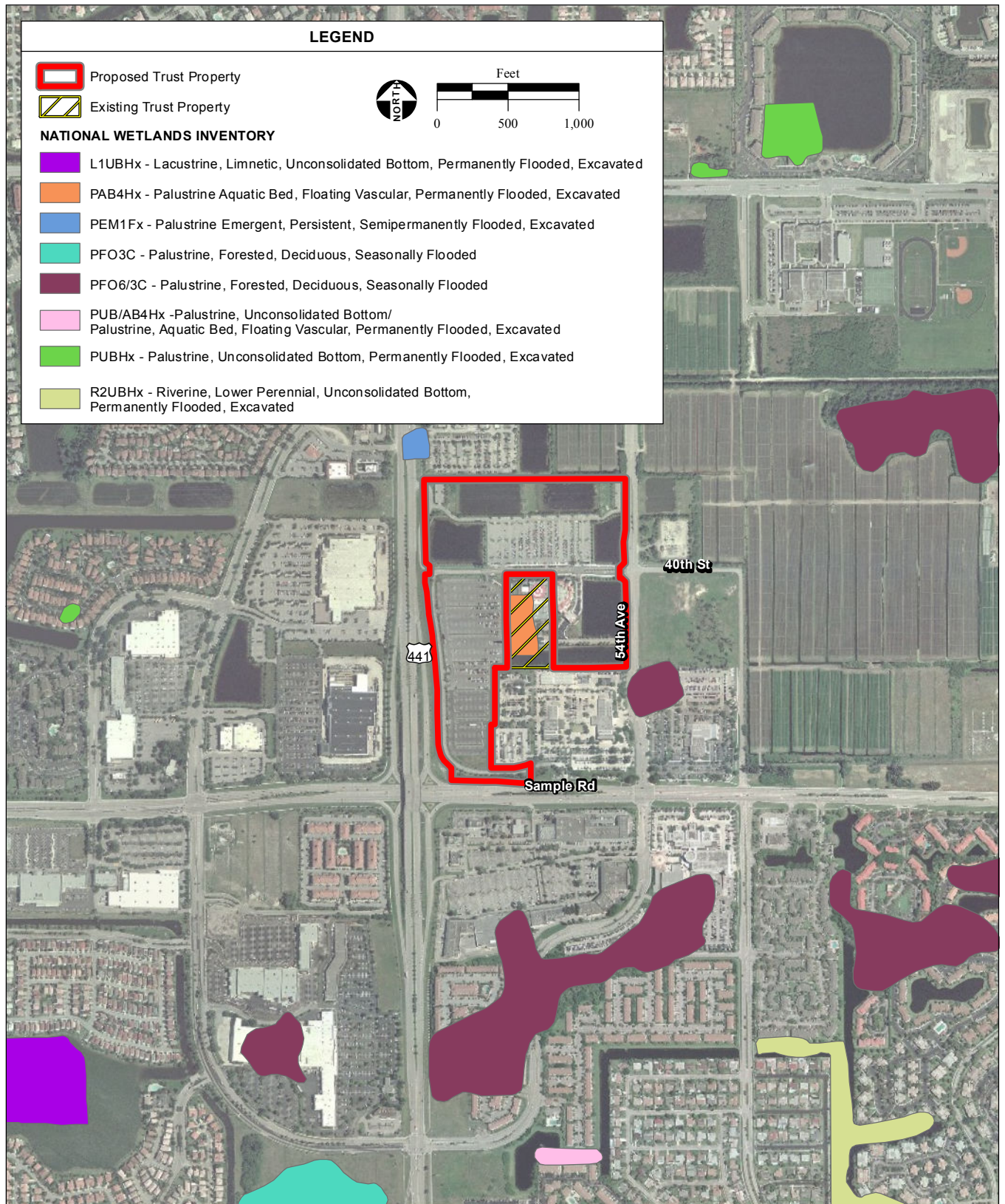
## **7.0 POTENTIALLY JURISDICTIONAL WATERS OF THE U.S.**

During the field assessment, the project site was informally assessed for potential waters of the U.S. in a manner consistent with the Supreme Court's decision regarding *Rapanos v. United States* and *Carabell v. United States* (USACE, 2007). The decision provides standards that distinguish between traditional navigable waters (TNWs), relatively permanent waters (RPWs), and non-relatively permanent waters (non-RPWs). Wetlands adjacent to non-TNWs are subject to CWA jurisdiction if:

- The waterbody is relatively permanent;
- The waterbody abuts an RPW; or
- The waterbody, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs.

The significant nexus standard is based on evidence applicable to ecology, hydrology, and the influence of the water on the "chemical, physical, and biological integrity of downstream traditional navigable waters" (USACE, 2007). Isolated wetlands are not subject to CWA jurisdiction, based on the Supreme Court's decision regarding Solid Waste Agency of Northern Cook County (SWAANC, 2001).

During the September 15, 2010 field survey, an informal wetland delineation was conducted within the project site. The delineation was conducted in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987). The field survey included the mapping of paired data point sets to evaluate whether the three parameter criteria (vegetation, soil, and hydrology) supported a wetland or upland determination. At wetland locations, one point was situated outside the limits of the estimated wetland area and the other point was situated within the estimated wetland area. Data sheets that document the basis for determining whether an area qualifies as a wetland were prepared for representative locations and are included as **Appendix D**. As a result of the delineation, no jurisdictional waters of the U.S. were identified onsite. Further details on the delineation are included in **Section 7.6**.



SOURCE: U.S. Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory, 1984; Friedmutter Group, 6/2010; Aerial Express aerial photograph, 4/2008; AES, 2010

Seminole Fee to Trust Project BA / 210520 ■

**Figure 9**  
National Wetlands Inventory

Manmade features that alter the natural hydrological patterns on-site include the casino-associated buildings, parking lots, and impervious surfaces. The manmade retention ponds and stormwater drainage system onsite is maintained by the Cocomar Water Control District (District).

## **7.1 INTERSTATE COMMERCE CONNECTION**

As discussed in **Section 6.2**, aquatic features within the project site include six retention ponds and one manmade seasonal wetland. The six retention ponds constitute the onsite stormwater drainage system that is used to collect and convey stormwater runoff from surrounding impervious surfaces off-site. The entire stormwater drainage system is highly regulated and unnatural. Runoff from the project site passes through a control structure and pump located near the southeast corner of the project site, which controls the flow of runoff into an irrigation canal, which then connects to an underground pipe beneath Sample Road. From here, the runoff is conveyed south through a system of canals, culverts, and lakes, that serve the southwest sub-basin and are owned and operated by the District. Prior to exiting the southwest basin, the runoff must pass through a structure that controls discharge from the entire Cocomar southwest basin, which is regulated by the SFWMD, before it is sent to the C-14 Canal. It is important to note that at this point in the system, runoff is combined with stormwater from the entire Cocomar southwest basin at the C-14 Canal, which effectively changes the biological composition and integrity of the water in supporting biota that would contribute to the downstream aquatic habitat (USACE, 2007).

The C-14 Canal is maintained by the SFWMD and it represents the first part in the drainage conveyance system, as described above, which is tidally influenced. Above this point, the drainage system is conveyed through a series of manmade, regulated structures, which do not possess a significant nexus to a TNW or water of the U.S (refer to **Section 4.0**). In accordance with the USACE JD Guidelines and the Rapanos Decision, “certain geographic features generally are not jurisdictional waters [such as] uplands transporting over land flow generated from precipitation (i.e. rain events and snowmelt)” (USACE, 2007). Since the six onsite retention ponds serve to collect precipitation and stormwater runoff from rain events and do not possess a significant nexus to a TNW or water of the U.S., these features would likely not be considered jurisdictional under the CWA (upon final approval by the USACE).

As mentioned above, the manmade wetland was created as part of the overall landscaping design for the casino. The seasonal wetland is regulated by a pump that is located between the two larger retention ponds directly to the east and south of the wetland. In this way, water levels in the wetland are mechanically maintained to mimic natural conditions. This seasonal wetland collects water from direct precipitation as well as from the stormwater conveyed from other onsite retention ponds before being pumped into the wetland. Due to human alteration of natural onsite conditions, this manmade seasonal wetland is not considered isolated since it is connected to the overall onsite drainage system. As explained above, the onsite stormwater drainage system is highly regulated and unnatural. The series of retention ponds, control structures, pumps, and pipelines that convey stormwater runoff to the C-14 Canal would likely not be considered jurisdictional per the Rapanos Decision. Thus, the manmade

seasonal wetland, as part of this system, would also not be considered jurisdictional under the CWA (upon final approval by the USACE). The USACE evaluates jurisdictional determinations for the significant nexus standard, as pursuant to the Rapanos decision, on a site-specific basis.

## **7.2 POTENTIAL IMPACTS**

Under Project Alternatives A, A-1, B, and C, some of the onsite retention ponds would be filled, dredged, or altered to accommodate the proposed casino improvements (refer to **Figures 4a** through **4c**). Direct impacts would occur to these onsite retention ponds and the manmade seasonal wetland. Indirect impacts could occur to the stormwater drainage system if water quality is affected by the Proposed Project. No potentially jurisdictional waters of the U.S. were identified onsite; therefore, no impacts to waters of the U.S. would occur.

## **8.0 FEDERALLY LISTED SPECIES AND CRITICAL HABITAT**

Based upon a review of the habitat requirements for federally listed species identified on the USFWS List of Federally Listed and Candidate Species for Broward County (**Appendix A**), the project site does not provide suitable habitat for any of these federally listed plants or wildlife species. As mentioned previously, the rationale for this determination is found in the individual species descriptions and analysis presented in the table as **Appendix B**.

Previous consultation between the USFWS and the Tribe (**Appendix E**) indicated that “no federally listed species or critical habitat were identified within the proposed project site” (USFWS, 2005). As mentioned in **Section 2.1**, the project site referred to in this letter contains the same parcels as those proposed to be taken into trust under the current Proposed Project; therefore, the USFWS 2005 consultation letter was taken into consideration during the preparation of this BA. The 2005 consultation letter states that the USFWS’ records “indicate the project site occurs within the core foraging area (CFA) (within 18.6 miles) of six wood stork nesting colonies” (page 2; USFWS, 2005). The wood stork is listed as an endangered species under the FESA. Since the Proposed Project occurs within the CFA of the federally endangered wood stork nesting colonies identified by the USFWS, potential impacts of the Proposed Project to this species are analyzed in this BA. A description of the wood stork is provided below.

### **8.1 WOOD STORK (*MYCTERIA AMERICANA*)**

**Federal Status:** Endangered

**Critical Habitat Designation/Recovery Plan:** The U.S. nesting population of wood storks was listed as endangered by the USFWS on February 28, 1984 [Federal Register 49 (4): 7332-7335]. The wood stork

is included under the 2007 South Florida Multispecies Recovery Plan (USFWS, 2007). Critical habitat has not been designated for this species. The USFWS' South Florida Ecological Services Office recognizes a 29.9 kilometer (18.6 mile) core foraging area (CFA) around all known wood stork colonies in south Florida (USFWS, 2010b). As indicated above, the project site occurs within a CFA of six wood stork nesting colonies (USFWS, 2005).

**Habitat and Biology:** Wood storks use freshwater and estuarine wetlands as feeding, nesting, and roosting sites. A description of foraging and nesting habitat requirements and behavior is provided in the following paragraphs.

### ***Foraging***

The wood stork typically utilizes freshwater marches, ponds, ditches, tidal creeks and pools, impoundments, pine/cypress depressions, and swamp sloughs for foraging (USWS, 2005). They forage most effectively in shallow water areas with highly concentrated prey, such as wetland depressions subject to seasonal drying (USFWS, 2005). According to the *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (USFWS Management Guidelines), wood storks are especially sensitive to environmental conditions at feeding sites; thus, birds may fly relatively long distances either daily or between regions annually, seeking adequate food and resources (USFWS, 1990). Wood storks feed primarily (often almost exclusively) on small fish between 1 and 8 inches in length. The USFWS Management Guidelines describes successful foraging sites as those where the water is between 2 to 14 inches deep. Good feeding conditions usually occur where water is relatively calm and uncluttered by dense thickets of aquatic vegetation. Often a dropping water level is necessary to concentrate fish at suitable densities for the wood stork to forage effectively. Conversely, a rise in the water level, especially when it occurs abruptly, disperses fish and reduces the value of a site as feeding habitat (USFWS, 1990).

As defined by the USFWS in the *South Florida Programmatic Concurrence on Wood Stork* (USFWS, 2010b), suitable foraging habitat (SFH) for wood stork includes:

*“wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 centimeters (2 to 15 inches). Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating, small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to, freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.”*



### ***Foraging Behavior***

As noted in *Wood Stork Conservation and Management for Landowners*, unlike most other wading birds wood storks feed by tactilocation or “touch” (USFWS and UGA, 2001). Wood storks use their partially open bills to rummage through water seeking contact with a prey item. Once the wood stork feels the prey item, it quickly snaps its beak shut, thereby retrieving the prey out of the water. For this reason, wood storks “feed most efficiently in wetland habitats that have dense or crowded prey items, such as [those that] might occur in a drying wetland during the late summer months” (USFWS and UGA, 2001). Further, with their tactile method of feeding, ponds “with steep edges and water at least 1.5 feet deep, are not good feeding habitats for storks” (USFWS and UGA, 2001).

### ***Nesting***

In regards to nesting, the USFWS Management Guidelines state that wood storks nest in colonies and will return to the same colony site for many years so long as the site and surrounding feeding habitat continue to supply the needs of the colony (USFWS, 1990). Wood storks require between 110 and 150 days for the annual nesting cycle, from the period of courtship until the nestlings become independent. Nesting activity may begin as early as December or as late as March in the southern Florida colonies. Thus, nesting colonies may be active until June or July in South Florida. Colony sites may also be used for roosting by wood storks at other times of the year. Almost all recent nesting colonies in the southeastern U.S. have been located either in woody vegetation over standing water, or on islands surrounded by broad expanses of open water. The most dominant vegetation in swamp colonies has been cypress, although wood storks also nest in swamp hardwoods and willows (USFWS, 1990).

**Regional Distribution:** Wood storks that nest in the southeastern U.S. appear to represent a distinct population, separate from the nearest breeding population in Mexico. Wood storks in the southeastern U.S. population have recently (since 1980) nested in colonies scattered throughout Florida, and at several central-southern Georgia and coastal South Carolina sites. Banded and color-marked wood storks from central and southern Florida colonies have dispersed during non-breeding seasons as far north as southern Georgia, the coastal counties in South Carolina, and southeastern North Carolina, and as far west as central Alabama and northeastern Mississippi. Wood storks from a colony in south-central Georgia have wintered between southern Georgia and southern Florida (USFWS, 1990).

## **8.2 POTENTIAL TO OCCUR ON-SITE**

The retention ponds on-site do not provide suitable nesting or foraging habitat for wood stork as defined by the USFWS (USFWS, 2005; USFWS, 2010b; USFWS and UGA, 2001) and described above. First, the physical characteristics of the retention ponds do not reflect those of suitable foraging wetlands commonly used by wood stork since the relatively steep sides and depth (> 15 inches) of the retention ponds do not accommodate the specific foraging technique employed by the wood stork to capture prey (refer to the USFWS Management Guidelines; USFWS, 1990). Second, the regular maintenance of the onsite retention ponds and their function as a component of the onsite stormwater collection system and



greater drainage system maintained by the District, largely inhibits the ponds from being utilized by wildlife (specifically: wood stork) as foraging or nesting habitat. Frequent mowing of the retention pond banks and removal of emergent vegetation are practiced to facilitate the effectiveness of the onsite ponds in retaining stormwater runoff from surrounding impervious surfaces during rain events. These regular, disturbance activities prevent many wildlife species (including wood stork) from utilizing the area for foraging, cover, and nesting. Third, the lack of seasonal drawdown and available supply of prey items in the retention ponds cause this area to not provide suitable foraging conditions for wood stork. As discussed above, wood storks prefer water bodies with seasonal drawdown so that prey are more densely concentrated (which increases foraging success), and further, the shallow water level enables them to effectively forage beneath the surface for prey. Fourth, no wood storks were observed onsite during the field survey and there are no records of wood storks observed on the project site. In summary, there is a low potential for wood stork to occur within the project site since there is not suitable nesting or foraging habitat present or previous sightings of this species onsite.

### 8.3 POTENTIAL IMPACTS

In accordance with the guidelines in the *South Florida Programmatic Concurrence on Wood Stork*, the Proposed Project would not result in “a net loss of foraging potential” for wood stork since the project site does not contain suitable foraging habitat for this species (USFWS, 2010b). Although no suitable habitat for wood stork was identified, since the project site is located within a CFA of six nesting wood stork colonies (USFWS, 2005), the Proposed Project **may affect, but is not likely to adversely affect** the wood stork with implementation of the proposed mitigation below.

**Mitigation Measures:** The following mitigation measures shall be implemented to avoid and/or minimize potential adverse effects to wood stork:

- A pre-construction survey will be conducted by a qualified biologist prior to the start of construction to ensure that no wood storks are present within the project site.
- Worker awareness training for wood stork will be conducted by a qualified biologist for all construction crew members. The training will include the following: a description and an identification of the wood stork and its habitat needs; an explanation of the status of the species and its protection under the FESA; and a list of measures being taken to reduce impacts to the species during project construction. A fact sheet conveying this information will be prepared for distribution to the crew members and anyone else who may enter the project site.
- While it is not anticipated that the wood stork will be present, if at any time a wood stork is observed within the project site, then all work will be stopped until informal consultation with USFWS is initiated.
- A qualified biologist will be present periodically to monitor all construction activities conducted in the vicinity of and within the onsite retention ponds to jointly ensure that no wood storks OR

migratory birds and waterfowl protected under the Migratory Bird Treaty Act (MBTA) (16 USC Sections 703-712) are present or harmed. It is recommended that a biological monitor be present onsite to monitor construction activities such as the initiation of groundbreaking and periodically thereafter when new intensive construction activities are planned (e.g., pile driving or other high-volume or high-vibration activities) near or within the retention ponds.

## **9.0 INTERRELATED AND INTERDEPENDENT ACTIVITIES**

Interrelated and interdependent effects are those that occur as a result of interrelated or interdependent activities associated with the Proposed Project. The construction of the proposed casino improvements on the existing trust property (Tract 65) is an interrelated and interdependent activity to the proposed federal action, which is to take the subject parcels into trust as described in **Section 1.2**. In this case, the proposed casino improvements would be constructed to some degree and size regardless of whether Alternatives A, A-1, or B were selected as the preferred alternative. Under Alternative C, two potential scenarios could occur on Tribally-owned fee parcels (refer to **Section 1.2**). Under scenario one, the Tribe would develop the fee parcels consistent with the Seminole Planned Main Street Development District (Seminole PMDD) plans with Coconut Creek. Scenario two assumes no development would occur on Tribally-owned fee parcels and the existing facilities and land uses currently on-site remain the same. For the purposes of this BA, impacts to water resources and federally listed species examined in **Sections 7.0** and **8.0**, respectively, would be minimized upon implementation of the mitigation measures provided in **Sections 7.4** and **8.3**. Therefore, it is recommended that the mitigation measures provided above be applied to whichever alternative is selected through the EIS as the preferred alternative, including Alternatives A, A-1, B, and C.

## **10.0 CUMULATIVE EFFECTS**

For the purposes of this BA, cumulative effects are defined as the effects of future state, local, or private activities that are reasonably certain to occur in the action area. This BA only addresses future state, local, or private activities occurring outside the action area if they would result in effects within the action area. Future federal actions that are unrelated to the Proposed Project are not considered in this BA because they will be subject to separate and independent consultation pursuant to Section 7 of FESA.

Generally speaking, future development projects could result in cumulative impacts to habitats, waters of the U.S., and special-status species or their habitats via disturbance and increased human population and activity. Cumulative impacts of this nature might include new development projects, habitat fragmentation, net loss of open space, edge effects, and disruption of wildlife corridors. The large, undeveloped property to the east of the project site (Johns property) is likely to be developed for mixed use commercial/residential in the future. The site is bounded by Sample Road to the south, Lyons Road

to the east, Banks/Northwest 54<sup>th</sup> Street to the west, and Cullum Road to the north. The site is currently in agricultural production (tomato crop).

However, no other specific projects are proposed for the action area at this time or in the reasonably foreseeable future. Any proposed future development in the action area or vicinity, including the development of the Johns property, would be required to mitigate for impacts to biological resources based on NEPA, CWA, and FESA requirements. Likewise, the Proposed Project is not anticipated to significantly contribute to any cumulative impacts within the action area due to the associated mitigation measures. Therefore, no cumulative impacts are anticipated to occur.

## **11.0 CONCLUSIONS AND DETERMINATION OF EFFECTS**

The Proposed Project **may affect, but is not likely to adversely affect** the federally listed wood stork with the implementation of the mitigation measures outlined in **Section 8.3** above. The project site does not occur within USFWS-designated critical habitat for the federally listed wood stork, therefore, no critical habitat would be destroyed or adversely modified as a result of the Proposed Project.

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## ***APPENDICES***

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# ***APPENDIX A***

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## ***FEDERALLY LISTED AND CANDIDATE SPECIES FOR BROWARD COUNTY, FLORIDA***



## Federally Listed & Candidate Species in Broward County, Florida

*Updated June 9, 2010*

	Common Name	Scientific Name	Federal Status	Notes
<b>Mammals</b>	Florida panther	<i>Puma (= Felis) concolor coryi</i>	E	
	Puma (=mountain lion)	<i>Puma (= Felis) concolor (all subsp. except coryi)</i>	T/SA	
	Southeastern beach mouse	<i>Peromyscus polionotus niveiventris</i>	T	Historic date unknown
	West Indian manatee	<i>Trichechus manatus</i>	E	
<b>Birds</b>	Audubon's crested caracara	<i>Polyborus plancus audubonii</i>	T	
	Everglade snail kite	<i>Rostrhamus sociabilis plumbeus</i>	E, CH	
	Florida scrub-jay	<i>Aphelocoma coerulescens</i>	T	Last documented mid 1970s
	Ivory-billed woodpecker	<i>Campephilus principalis</i>	E	Historic date unknown
	Piping plover	<i>Charadrius melodus</i>	T	Historic date unknown
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Last documented prior to 1960
	Red knot	<i>Calidris canutus rufa</i>	C	
	Wood stork	<i>Mycteria americana</i>	E	
<b>Reptiles</b>	American crocodile	<i>Crocodylus acutus</i>	T	
	American alligator	<i>Alligator mississippiensis</i>	T/SA	
	Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	
	Green sea turtle <sup>1</sup>	<i>Chelonia mydas</i>	E	
	Hawksbill sea turtle <sup>1</sup>	<i>Eretmochelys imbricata</i>	E	
	Leatherback sea turtle <sup>1</sup>	<i>Dermochelys coriacea</i>	E	
	Loggerhead sea turtle <sup>1</sup>	<i>Caretta caretta</i>	T	
<b>Fishes</b>	Smalltooth sawfish <sup>2</sup>	<i>Pristis pectinata</i>	E	
<b>Invertebrates</b>	Bartram's hairstreak butterfly	<i>Strymon acis bartrami</i>	C	Historic date unknown
	Florida leafwing butterfly	<i>Anaea troglodyta floridalis</i>	C	1988
	Staghorn coral <sup>2</sup>	<i>Acropora cervicornis</i>	PT	
<b>Plants</b>	Beach jacquemontia	<i>Jacquemontia reclinata</i>	E	
	Johnson's seagrass <sup>2</sup>	<i>Halophila johnsonii</i>	T, CH	
	Okeechobee gourd	<i>Cucurbita okeechobeensis</i> ssp. <i>okeechobeensis</i>	E	
	Tiny polygala	<i>Polygala smallii</i>	E	

E=Endangered; T=Threatened; PE=Proposed Endangered; PT=Proposed Threatened; C=Candidate; SA=Similarity of Appearance to a listed taxon; XN=Experimental Population, Non-Essential; CH=Critical Habitat; PCH=Proposed Critical Habitat; <sup>1</sup>=National Marine Fisheries Service has lead for this species in the water, please contact National Marine Fisheries Service for more information and/or consultation for aquatic projects; <sup>2</sup>=National Marine Fisheries Service has lead for this species, please contact National Marine Fisheries Service for more information and/or consultation

## ***APPENDIX B***

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### ***TABLE OF REGIONALLY OCCURRING FEDERALLY LISTED AND CANDIDATE SPECIES***

**APPENDIX B –SEMINOLE TRIBE FEE TO TRUST BA**

**TABLE 1  
FEDERALLY LISTED SPECIES IN BROWARD COUNTY, FL**

FEDERALLY LISTED SPECIES	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
<b>Invertebrates</b>					
<i>Strymon acis bartrami</i>  Bartram's hairstreak butterfly	FC	Endemic to the Caribbean and the state of Florida (NatureServe Explorer, 2010).	Known to occur only within tropical pinelands and pine rocklands that retain its only known hostplant, pineland croton ( <i>Croton linearis</i> ). Larvae feed only on pineland croton flowers and leaves. Adults take nectar from that and other native and non-native plants. This species is a non migrant (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no pineland croton plants and therefore no suitable habitat on-site for this species.
<i>Anaea troglodyta floralis</i>  Florida leafwing butterfly	FC	Endemic to Florida key islands and is currently known to occur only on the mainland, specifically on Long Pine Key in Everglades National Park and few natural areas in southern Miami (NatureServe Explorer, 2010).	Known to occur in tropical dry pine scrub on limestone, usually seen near patches of pineland croton, a food source. Adults feed from rotting fruit, sap, and occasionally flowers such as those of palmettos ( <i>Sabal</i> sp.). This species is a non migrant (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no pineland croton plants or tropical dry scrub on-site; therefore there is no suitable habitat on-site for this species.
<i>Acropora cervicornis</i>  Staghorn coral	PT	Widespread distribution in tropical western Atlantic Ocean, in coral reefs along the coast of Florida (NatureServe Explorer, 2010).	Marine; A stony coral, known to occupy depth ranging from 0-50 meters, but typically occurs between 15-30 meters in colonies on bank reefs and fringing reefs (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There is no suitable habitat on-site for this species.
<b>Plants</b>					
<i>Jacquemontia reclinata</i>  Beach jacquemontia	FE	Florida; In Broward, Martin, Miami-Dade, and Palm Beach counties (NatureServe Explorer, 2010).	Known to occur in pine rocklands and the crest and lee side of coastal dunes (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no pine rocklands or coastal dune habitat suitable for this species on-site.
<i>Halophila johnsonii</i>  Johnson's seagrass	FT	Narrowly endemic to coastal lagoons in eastern Florida from Sebastian Inlet to Virginia Key in Biscayne Bay. Extends from Brevard, Indian River, Martin, Miami-Dade, Palm Beach and St. Lucie Islands (NatureServe Explorer, 2010).	Known to occur in rhizomatous seagrass forming low mats either in pure stands or with shoalgrass ( <i>Halodule wrightii</i> ) in intertidal areas (6 inches to 6 feet in depth) (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There is no coastal lagoon habitat present on-site for this species.
<i>Cucurbita okeechobeensis</i> ssp. <i>okeechobeensis</i>  Okeechobee gourd	FE	Currently persists at a few sites on the shore of Lake Okeechobee in south Florida. It has also been collected in Glades county, on an island in Lake Okeechobee, and in Broward and Dade counties, where it was apparently ephemeral. Also known to occur in Palm Beach, Seminole, Lake, and Volusia counties (NatureServe Explorer, 2010).	This vigorous annual vine was originally found in swampy forests and hammocks on muck soils. Today, this species is restricted to disturbed areas that are not cultivated, such as ditch banks and wet road shoulders (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> The project site is out of the known geographic range for this species. In addition, this species was not identified at the time of the site visit.



FEDERALLY LISTED SPECIES	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
<i>Polygala smallii</i> Tiny polygala	FE	Narrowly endemic to the southern portion of Florida's Atlantic coast. In Broward, Martin, Miami-Dade, Palm Beach, and St. Lucie counties (NatureServe Explorer, 2010).	Known to occur in open grassy pineland, sandy pine rockland, scrubby flatwoods, and sandhill (often in disturbed areas) (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species on-site.
<b>Fish</b>					
<i>Pristis pectinata</i> Smalltooth sawfish	FE	Atlantic U.S. coast, adults may migrate northward with warming temperatures in spring and southward with cooling temperatures in fall (NatureServe Explorer, 2010).	Known to occur in shallow coastal, estuarine, and fresh waters, often in brackish water near river mouths and large embayments, in deeper holes on bottoms of mud or muddy sand. Mature individuals regularly occur in waters deeper than 50 meters (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> The project site does not contain suitable habitat for this species.
<b>Reptiles</b>					
<i>Crocodylus acutus</i> American crocodile	FT	Range extends from southern Florida, Sinaloa (Mexico), and Yucatan (Mexico) south through Middle America (Pacific and Atlantic) and the West Indies to northern South America (to northern Peru and Venezuela). In Glades, Miami-Dade, and Monroe counties in Florida (NatureServe Explorer, 2010).	Known to occur is coastal mangrove swamps, brackish and salt water bays, lagoons, marshes, tidal rivers, brackish creeks; also abandoned coastal canals and borrow pits. Individuals may wander widely in coastal waters and may range inland into lakes and lower reaches of large rivers. American crocodiles occupy mostly nonsaline waters in the nonbreeding season, moving to saline waters in the breeding season. In Florida, primary habitat is inland mangrove swamps protected from wave action (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> The retention ponds within the project site do not provide suitable habitat for this species. The project site is located in a highly urbanized area and the retention ponds have been excavated entirely in uplands, inland of coastal waters. These retention ponds are frequently maintained and human disturbance activities include mowing of grassy banks and removal of emergent vegetation.
<i>Alligator mississippiensis</i> American alligator	FT	Range extends from coastal North Carolina to the Florida Keys, and west to southern Texas, north to southeastern Oklahoma and Arkansas (NatureServe Explorer, 2010).	Known to inhabit fresh and brackish marshes, ponds, lakes, rivers, swamps, bayous, canals, and large spring runs (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There is no suitable habitat for this species on-site; similar to the response description for American alligator above.
<i>Drymarchon corais couperi</i> Eastern indigo snake	FT	Range lies within the coastal plain of the southeastern U.S. including Alabama, Florida, Georgia, Mississippi, and South Carolina (NatureServe Explorer, 2010).	Known to inhabit sandhill regions dominated by mature longleaf pines, turkey oaks, and wiregrass, flatwoods, most types of hammocks, coastal scrub, dry glades, palmetto flats, prairie, brushy riparian and canal corridors, and wet fields. Occupied sites are often near wetlands and frequently are in association with gopher tortoise ( <i>Geomys</i> sp.) burrows. Refuges include tortoise burrows, stump holes, land crab burrows, armadillo burrows, or similar sites. Eggs may be laid in gopher tortoise burrows. Commonly forages along the edges of wetlands (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.

FEDERALLY LISTED SPECIES	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
<i>Chelonia mydas</i> Green sea turtle	FE	Distribution is pantropical in the Atlantic, Pacific, and Indian oceans. In U.S. Atlantic waters, this species occurs near the U.S. Virgin Islands and Puerto Rico. Important feeding areas in Florida include the Indian River, Homossassa Bay, Crystal River, and Cedar Key; however, species rarely known to nest in Florida (NatureServe Explorer, 2010).	Marine; In the Gulf of Mexico and along the southeastern U.S. Atlantic coast. Feeding occurs in shallow, low-energy waters with abundant submerged vegetation and also in convergence zones in the open ocean. Migrations may traverse open seas. Adults are tropical in distribution, whereas juveniles range into temperate waters (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> No marine habitat occurs within the project site.
<i>Eretmochelys imbricate</i> Hawksbill sea turtle	FE	Distribution includes tropical and subtropical seas of the Atlantic, Pacific, and Indian oceans. Widely distributed in the Caribbean sea and western Atlantic ocean. Observed in Florida with some regularity in the waters near the Florida Keys and on the reefs off Palm Beach County where the warm Gulf Stream current passes close to shore (SFESO, 1999a).	Marine; <i>Sargassum</i> and floating debris common refuge for hatchlings, coral reefs provide resident foraging habitat for juveniles, subadults, and adults. Known to inhabit mangrove-fringed bays and estuaries, particularly along the eastern shore of continents where coral reefs are absent. Nesting occurs on low and high energy beaches in tropical oceans, frequently sharing beaches with green sea turtles ( <i>Chelonia mydas</i> ) (SFESO, 1999a).	Year-Round	<b>No.</b> No marine habitat occurs within the project site.
<i>Dermochelys coriacea</i> Leatherback sea turtle	FE	Distribution includes temperate waters; nests in tropical and subtropical latitudes on beaches of the Atlantic, Indian, and Pacific oceans. In the western hemisphere, nesting occurs in Florida (very rarely in Georgia), along the shores of the Gulf of Mexico, in the West Indies, and along the Atlantic shore of Central America and the Pacific shore of northern South America (NatureServe Explorer, 2010).	Marine; open ocean, often near edge of continental shelf, also in seas, gulfs, bays, and estuaries. Mainly pelagic, seldom approaching land except for nesting (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> No marine habitat occurs within the project site.
<i>Caretta caretta</i> Loggerhead sea turtle	FT	Distribution includes warmer parts of the Atlantic, Pacific, and Indian oceans, and Mediterranean and Caribbean seas. Ranges into temperate zones in summer. Rare or absent far from mainland shores. Major nesting areas are in temperate and subtropical areas including the southeastern U.S. in Florida, Georgia, South Carolina, North Carolina, and the Gulf Coast (NatureServe Explorer, 2010).	Marine; open sea to more than 500 miles from shore, mostly over continental shelf, and in bays, estuaries, lagoons, creeks, and mouths of rivers, mainly warm temperate and subtropical regions not far from shorelines (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> No marine habitat occurs within the project site.
<b>Birds</b>					

FEDERALLY LISTED SPECIES	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
<i>Polyborus plancus audubonii</i>  Audubon's crested caracara	FT	Distribution includes Florida, southern Texas, southwestern Arizona, and northern Baja California, through Mexico and Central America to Panama, including Cuba. In Florida, the region of greatest abundance for this species includes a five-county area north and west of Lake Okeechobee, including: Glades, Desoto, Highlands, Okeechobee, and Osceola counties (SFESO, 1999b).	In Florida, known to occur in dry or wet prairie areas with scattered cabbage palms ( <i>Sabal palmetto</i> ). It may be found in lightly wooded areas. Scattered saw palmetto ( <i>Serenoa repens</i> ), scrub oaks ( <i>Quercus geminate</i> , <i>Q. minima</i> , <i>Q. pumila</i> ), and cypress ( <i>Taxodium</i> spp.). Preferable nesting habitat includes cabbage palms surrounded by open habitats with low ground cover and low density of tall or shrubby vegetation (SFESO, 1999b).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Rostrhamus sociabilis plumbeus</i>  Everglade snail kite	FE	Restricted to Cuba, the Isle of Pines and the state of Florida, including St. Johns River headwaters, southwestern Lake Okeechobee, small areas in Broward, Dade, and Palm Beach counties in Florida, parts of Everglades National Park, Loxahatchee National Wildlife Refud, and Big Cypress National Preserve (NatureServe Explorer, 2010). The project site is located within the South Florida USFWS Everglade snail kite Consultation Area (SFESO, 2003a).	Known to occur in Florida in large, open freshwater marshes and lakes with shallow (<4 ft.) open waters; open water without emergent vegetation are required for foraging; nests usually 1-5 m. above water in low tree or shrub (commonly willow ( <i>Salix</i> sp.), wax myrtle ( <i>Morella cerifera</i> ), pond apple ( <i>Annona glabra</i> ), or cattails ( <i>Typha</i> sp.)) (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> The retention basins on-site do not provide suitable habitat for this species. Further, this species was not observed during the September 15, 2010 site visit.
<i>Aphelocoma coerulescens</i>  Florida scrub jay	FT	Restricted mostly to scrub ridges of central peninsular Florida with a few scattered occurrences on Gulf and Atlantic coastal ridges. Has been extirpated from Alachua, Broward, Clay, Dade, Duval, Pinellas, and St. Johns counties. Currently many populations are small and isolated (NatureServe Explorer, 2010).	Known to occur in oak scrub on white, drained sand, in open areas without a dense canopy. Palmetto ( <i>Sabal</i> sp.), sand pine ( <i>Pinus clausa</i> ), and rosemary ( <i>Andromeda</i> sp.) may occur in these areas. Includes scrub with no canopy, sand pine scrub, scrubby flatwoods, and coastal scrub. Fire suppressed scrubs with dense, tall understories or encroaching pin canopies provide poor habitat. Rarely in areas with greater than 50 percent canopy cover that is taller than 3 m (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Campephilus principalis</i>  Ivory billed woodpecker	FE	Formerly occurred in southeastern U.S. and Cuba, declined to extinction or near extinction due primarily to habitat loss from logging; recent records from Arkansas and Florida are in need of confirmation (NatureServe Explorer, 2010).	In the U.S., known to occur in swampy forests, especially large bottomland river swamps of coastal plain and Mississippi Delta and cypress swamps of Florida, in areas with many dead and dying trees. Nests in tall old trees, at a height of about 8-21 m (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.



FEDERALLY LISTED SPECIES	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
<i>Charadrius melodus</i>  Piping plover	FT	Populations in Northern Great Plains and Great Lakes migrate mainly to Gulf Coast for winter. Atlantic coast breeders migrate primarily to Atlantic coast sites farther south (NatureServe Explorer, 2010).	Known to breed on sandy upper beaches, especially where scattered grass tufts are present, and sparsely vegetated shores and islands of shallow lakes, ponds, rivers, and impoundments. Nests may also be built on sandy open flats among shells or cobble behind dunes (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Picoides borealis</i>  Red-cockaded woodpecker	FE	Historical range included the southeastern Piedmont and Coastal Plain from New Jersey to Texas, and inland to Kentucky, Tennessee, Missouri, and Oklahoma. Now populations are fragmented and most are quite small. No heritage records exist for Broward Co., Florida (NatureServe Explorer, 2010).	Known to forage in a diversity of forested habitat types that includes pines ( <i>Pinus</i> sp.) of various ages as well as some hardwood-dominated habitats. Most foraging appears to take place on older pine trees or in open pine habitats. Nesting and roosting occur in tree cavities. Active cavity trees are almost exclusively old, living, flat-topped pine trees (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Calidris canutus rufa</i>  Red knot	FC	Nesting range in North America is in the northwestern and northern Alaska, and Canadian arctic islands. Migrants winter mainly in coastal regions of southern California, Gulf Coast and generally rare north of southern South America such as Patagonian and Argentinean coasts. Delaware Bay is the most important spring migration stopover in the eastern U.S. (NatureServe Explorer, 2010).	Known to occur primarily on seacoasts on tidal flats and beaches, less frequently in marshes and flooded fields. On sandy or pebbly beaches, especially at river mouths; feeds on mudflats, loafs, and sleeps on Salinas and salt-pond dikes. Nests on ground in barren or stony tundra and in well-vegetated moist tundra (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Mycteria americana</i>  Wood stork	FE	Distribution includes U.S. Gulf Coast and Atlantic coast. Historically Florida to Texas. Southeastern U.S. breeders winter within the breeding range, rarely north to northwestern Florida and coastal Georgia. In the U.S. the highest winter densities occur in peninsular Florida (NatureServe Explorer, 2010). The project site is located within the South Florida USFWS Wood Stork Consultation Area (SFESO, 2003b).	Known to occur chiefly in freshwater marshes, swamps, lagoons, ponds, flooded fields. Depressions in marshes are important during drought; also occurs in brackish wetlands. Nests mostly in upper parts of cypress trees, mangroves, or dead hardwoods over water or on islands along streams or adjacent to shallow lakes. Forages in freshwater (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> The retention basins on-site do not provide suitable foraging habitat for this species due to the steepness of the ponds' banks, the water depth greater than 15 inches as well as frequent human disturbances such as the removal of emergent vegetation and mowing of grassy banks. The project site does not provide suitable roosting or nesting habitat for this species since there are no cypress trees or other large trees surrounded by large expanses of water, which are preferred by wood stork to roost and protect nest sites. This species was not observed during the September 10, 2010 site visit. Refer to the text of the BA for further descriptions and rationale for the lack of suitable habitat present onsite.
<b>Mammals</b>					

FEDERALLY LISTED SPECIES	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
<i>Puma concolor coryi</i>  Florida Panther	FE	Distribution includes primarily swampland in southern Florida. Former range included southeastern U.S., but now probably extirpated in states other than Florida. Known to occupy less than 15,000 sq km in southern Florida including national wildlife refuges, conservation areas, private ranches and preserves (NatureServe Explorer, 2010).	Known to occur in heavily forested areas in lowlands and swamps, also upland forests in some parts of range, areas with adequate deer or wild hog populations. Habitat includes tropical hammocks, pine flatwoods, cabbage palm forests, mixed swamp, cypress swamp, live oak hammocks, sawgrass marshes; depends on large contiguous blocks of wooded habitat, though interspersed fields and early successional habitats may be beneficial through their positive prey populations (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Puma concolor</i> (all subspecies except coryi)  Puma (mountain lion)	FT	Widely distributed from Canada to South America; In eastern North America, now definitely known to occur only in southern Florida and Upper Peninsula of Michigan. Elsewhere in N. America, currently restricted to mainly mountainous, relatively unpopulated areas from sea level to 14,500 ft (NatureServe Explorer, 2010).	Known to occur in mountainous or remote undisturbed areas. May occupy wide variety of habitats: swamps, riparian woodlands, broken country with good cover of brush or woodland. Young are born in secluded places among rocks or dense vegetation (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Peromyscus polionotus</i> ssp. <i>niveiventris</i>  Southeastern beach mouse	FT	Historic distribution occurred from New Smyrna Beach possibly as far south as Miami Beach. Now known from a few isolated locations from southern Volusia County to Martin County (Florida Natural Areas Inventory, 2001).	Known to occur in primary, secondary, and occasionally tertiary sand dunes with a moderate cover of grasses and forbs, including sea oats ( <i>Uniola paniculata</i> ), bitter panicum ( <i>Panicum amarum</i> ) and beach dropseed ( <i>Sporobolus virginicus</i> ). Adjacent coastal palmetto flats (coastal stand) and scrub are important during and following hurricanes (Florida Natural Areas Inventory, 2001).	Year-Round	<b>No.</b> There are no suitable habitats for this species within the project site.
<i>Trichechus manatus</i>  West Indian manatee	FE	Limited range in coastal areas of subtropical and tropical areas of northern South America, West Indies/Caribbean region, Gulf of Mexico and southeastern North America (mainly Florida) (NatureServe Explorer, 2010).	In Florida, manatees occur in freshwater, brackish, and marine environments; typical coastal and inland habitats include coastal tidal rivers and streams, mangrove swamps, salt marshes, freshwater springs, and vegetated bottoms where feeding occurs in shallow grass beds with ready access to deep channels (NatureServe Explorer, 2010).	Year-Round	<b>No.</b> No marine habitat occurs within the project site.

**SPECIES STATUS CODES:**

**Federal: United States Fish and Wildlife Service (USFWS)**

FT      Federally Threatened  
FE      Federally Endangered  
FC      Candidate for Listing

SOURCES: (NatureServe Explorer, 2010); (SFESO, 1999a/b); (SFESO, 2003a/b); (Florida Natural Areas Inventory, 2001).

# ***APPENDIX C***

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## ***PLANT AND WILDLIFE SPECIES OBSERVED WITHIN THE PROJECT SITE***

# WILDLIFE SPECIES OBSERVED ON THE PROJECT SITE

## Seminole Tribe Fee-to-Trust

September 15, 2010

### BIRDS

#### Order: Falconiformes

*Pandion haliaetus*

#### Common Name

Osprey

#### Order: Ciconiiformes

*Egretta caerulea*

*Egretta tricolor*

*Egretta thula*

Little Blue Heron

Tricolored Heron

Snowy Egret



# PLANT SPECIES OBSERVED ON THE PROJECT SITE

## Seminole Tribe Fee-to-Trust EIS

September 15, 2010

(\*) Asterisk indicates a non-native species  
(+) Plus indicates cultivated or ornamental species

Scientific Name	Common Name
<b>ACERACEAE</b>	<b>MAPLE FAMILY</b>
<i>Acer rubrum</i>	Red maple
<b>APIACEAE</b>	<b>CARROT FAMILY</b>
<i>Hydrocotyle umbellata</i>	Water pennywort
<b>AGAPANTHACEAE</b>	<b>AGAPANTHUS FAMILY</b>
<i>Agapanthus</i> sp. +	Lilly of the Nile
<b>ARACEAE</b>	<b>ARUM FAMILY</b>
<i>Peltandra virginica</i>	Arrow arum
<b>ARECACEAE</b>	<b>PALM FAMILY</b>
<i>Serena repens</i>	Saw palmetto
<i>Roystonea regia</i>	Florida royal palm
<b>ASCLEPIADACEAE</b>	<b>MILKWEED FAMILY</b>
<i>Asclepias longifolia</i>	Longleaf milkweed
<b>ASTERACEAE</b>	<b>SUNFLOWER FAMILY</b>
<i>Ambrosia artemisiifolia</i>	Common ragweed
<b>BIGNONIACEAE</b>	<b>TRUMPET CREEPER FAMILY</b>
<i>Tabebuia</i> sp.*	Trumpet tree
<b>CHRYSOBALANACEAE</b>	<b>CHRYSOBALANUS FAMILY</b>
<i>Chrysobalanus icaco</i> *	Coco plum
<b>CYPERACEAE</b>	<b>SEDGE FAMILY</b>
<i>Cyperus papyrus</i> *	Egyptian papyrus
<b>FABACEAE</b>	<b>LEGUME FAMILY</b>
<i>Acacia auriculiformis</i> *	Earleaf acacia
<b>FAGACEAE</b>	<b>OAK FAMILY</b>
<i>Quercus virginiana</i>	Southern live oak
<b>MALVACEAE</b>	<b>MALLOW FAMILY</b>
<i>Hibiscus grandiflorus</i> *	Swamp rose mallow
<b>NAJADACEAE</b>	<b>WATER NYMPH FAMILY</b>
<i>Najas guadalupensis</i>	Common water nymph
<b>NYCTAGINACEAE</b>	<b>FOUR O'CLOCK FAMILY</b>
<i>Bougainvillea</i> sp. +	Bougainvillea
<b>POACEAE</b>	<b>GRASS FAMILY</b>
<i>Andropogon glomeratus</i>	Bushy bluestem
<i>Pennisetum setaceum</i> 'Rubrum' +	Purple fountain grass
<i>Tripsacum dactyloides</i>	Eastern gama grass
<i>Sorghum halepense</i> *	Johnson grass
<i>Cynodon dactylon</i> *	Bermuda grass
<b>PONTEDERIACEAE</b>	<b>PICKERELWEED FAMILY</b>
<i>Pontederia cordata</i>	Pickereelweed
<b>TYPHACEAE</b>	<b>CATTAIL FAMILY</b>
<i>Typha domingensis</i>	Southern cattail
<b>VERBENACEAE</b>	<b>VERBENA FAMILY</b>
<i>Phyla nodiflora</i>	Capeweed

# ***APPENDIX D***

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## ***WETLAND DELINEATION DATA SHEETS***

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seminole Coconut Creek Casino City/County: Broward Co. Sampling Date: 9/15/10  
 Applicant/Owner: Seminole Tribe State: FL Sampling Point: 1  
 Investigator(s): Jessica Griggs Section, Township, Range: S18, T48S, R42E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): CONCAVE Slope (%): 0  
 Subregion (LRR or MLRA): LRR-U Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:  <p style="text-align: center;">pt taken inside maintained "natural wetland" in Tract D opposite casino main entrance</p>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0-6</u>	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>2</u>	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Two drainage culverts located in this "natural" wetland area  
 one is 24" above ground / water surface and has steel grate on top.  
 other is at surface of ground / water & has a steel grate.  
 Trash / debris present wrapped on low-lying grate.



**VEGETATION** – Use scientific names of plants.

Sampling Point: 1

Tree Stratum (Plot size: <u>2m<sup>2</sup></u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>5</u>	<u>—</u>	<u>OBL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<b>Sapling Stratum</b> (Plot size: <u>φ</u> ) <u>5</u> = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<b>Shrub Stratum</b> (Plot size: <u>φ</u> ) _____ = Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants; including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<b>Herb Stratum</b> (Plot size: <u>2m<sup>2</sup></u> ) _____ = Total Cover				
1. <u>Hydrocotyle umbellata</u>	<u>5</u>	<u>—</u>	<u>OBL</u>	
2. <u>Tripsacum dactyloides</u>	<u>15</u>	<u>DOM</u>	<u>FAC</u>	
3. <u>Andropogon glomeratus</u>	<u>8</u>	<u>DOM</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<b>Woody Vine Stratum</b> (Plot size: <u>φ</u> ) <u>28</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	

Remarks: (If observed, list morphological adaptations below).

Lots of bare ground surface. Dark soil, saturated, and water ponding present on surface. sparsely vegetated seasonally/controlled inundation via storm water drains in depression.

## SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/1	—	—	—	—	—	clay/loam	greasy

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☒ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
☐ (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12) (LRR T, U)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

 Type: φ  
 Depth (inches): φ
Hydric Soil Present? Yes ☒ No ☐

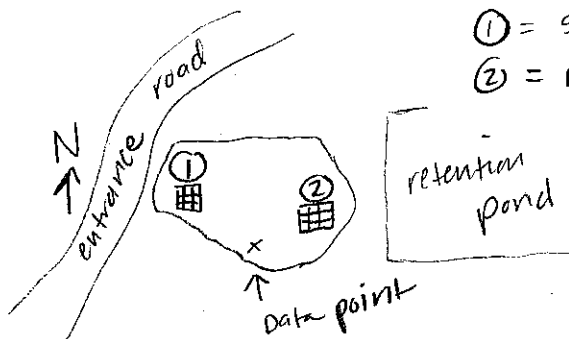
## Remarks:

obvious wetland, maintained in low lying area adjacent to retention pond in front of casino entrance.  
 mulch + landscaping plants present around edge of wld.

Two storm drains: ①, ②

① = surface grate

② = raised grate on 1 ft x 2 ft concrete box



mucky soil, dark in color, greasy texture. Heavily saturated. surface water present. sparse vegetation.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seminole Coconut Creek Casino City/County: Broward Co. Sampling Date: 9/15/10  
 Applicant/Owner: Seminole Tribe State: FL Sampling Point: 2  
 Investigator(s): Jessica Griggs Section, Township, Range: S18, T48S, R42E  
 Landform (hillslope, terrace, etc.): slope/bank Local relief (concave, convex, none): convex Slope (%): 2  
 Subregion (LRR or MLRA): LRR-U Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: N/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:  <p style="text-align: center;">point taken outside of maintained "natural" wetland on mulch-covered bank adjacent to road in heavily landscaped corridor in Tract D</p>		

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

mulch layer 2 inches deep on surface.  
 No hydrology indicators present.  
 moisture present in soil, but not saturated within top 4 inches



**VEGETATION – Use scientific names of plants.**

 Sampling Point: 2

Tree Stratum (Plot size: <u>1 m<sup>2</sup></u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Roystonea regia</u>	<u>35</u>	<u>DOM</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<b>Sapling Stratum</b> (Plot size: <u>φ</u> ) <u>35</u> = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<b>Shrub Stratum</b> (Plot size: <u>φ</u> ) _____ = Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<b>Herb Stratum</b> (Plot size: <u>2 m<sup>2</sup></u> ) _____ = Total Cover				
1. <u>Pennisetum setaceum 'Rubrum'</u>	<u>5</u>	<u>-</u>	<u>NI</u>	
2. <u>Bougainvillea sp.</u>	<u>5</u>	<u>-</u>	<u>NI</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<b>Woody Vine Stratum</b> (Plot size: <u>φ</u> ) <u>10</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				

Remarks: (If observed, list morphological adaptations below).

point taken in landscaped area outside of maintained "natural" wetland.  
 point taken in heavily mulched area, sparse vegetated ground cover except for landscaped plants in vicinity.

## SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 6/2	100	—	—	—	—	sand	no redox features
2-4	10YR 2/2	100	—	—	—	—	sand/silt	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
☐ (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12) (LRR T, U)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: φ  
 Depth (inches): φ

Hydric Soil Present? Yes ☐ No ☒

## Remarks:

Sand in upper 2" of soil, no redox features present, sample taken in area with mulch covering the surface and no herbaceous roots found in soil.

No redox features or other hydric soil indicators observed in darker layer at 2-4 inches in depth.

Because sample taken in landscaped area adjacent to maintained "natural" wetland, topsoil may have been added in past to cultivate landscaping plants.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seminole Coconut Creek Casino City/County: Broward Co. Sampling Date: 9/15/10  
 Applicant/Owner: Seminole Tribe State: FL Sampling Point: 3  
 Investigator(s): Jessica Griggs Section, Township, Range: S18, T48S, R42E  
 Landform (hillslope, terrace, etc.): Sloped bank Local relief (concave, convex, none): convex Slope (%): 2  
 Subregion (LRR or MLRA): LRR-U Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: PAB4HX

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes \_\_\_\_\_ No ☒  
 Hydric Soil Present? Yes \_\_\_\_\_ No ☒  
 Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

Is the Sampled Area  
within a Wetland? Yes \_\_\_\_\_ No ☒

### Remarks:

Point taken on maintained/mowed grassy bank of linear retention pond directly south of existing casino on Tract 65 (Trust Land)

## HYDROLOGY

### Wetland Hydrology Indicators:

#### Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)  
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)  
☐ Saturation (A3) ☐ Marl Deposits (B15) (LRR U)  
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)  
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3)  
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)  
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6)  
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)  
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)

#### Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Moss Trim Lines (B16)  
☐ Dry-Season Water Table (C2)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_  
 (Includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:

Point taken within NWI classification PAB4HX = Palustrine Aquatic Bed, Floating vascular, Permanently Flooded, Excavated (NWI, 1984).  
 This site was previously maintained as a retention pond prior to the construction of the existing casino, whereby the retention ponds were reconfigured.  
 This retention pond is maintained as a stormwater runoff storage & flood control basin. This pond drains via culvert & underground piping to the north to the retention pond in Tract D, opposite the casino main entrance. Normal circumstances are not present.



**VEGETATION – Use scientific names of plants.**

 Sampling Point: 3

Tree Stratum (Plot size: <u>ϕ</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<b>Dominance Test worksheet:</b>
				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
				<b>Prevalence Index worksheet:</b>
				Total % Cover of: _____ Multiply by: _____
				OBL species _____ x 1 = _____
				FACW species _____ x 2 = _____
				FAC species _____ x 3 = _____
				FACU species _____ x 4 = _____
				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
				<b>Hydrophytic Vegetation Indicators:</b>
				<input type="checkbox"/> Dominance Test is >50%
				<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Definitions of Vegetation Strata:</b>
				<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
				<b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
				<b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
				<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
				<b>Woody vine</b> – All woody vines, regardless of height.
				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
<b>Sapling Stratum (Plot size: <u>ϕ</u> )</b> _____ = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<b>Shrub Stratum (Plot size: <u>ϕ</u> )</b> _____ = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<b>Herb Stratum (Plot size: <u>1m<sup>2</sup></u> )</b> _____ = Total Cover				
1. <u>Cynodon dactylon</u>	<u>96</u>	<u>Dom</u>	<u>FACU</u>	
2. <u>Trifolium sp.</u>	<u>3</u>	<u>—</u>	<u>FAC</u>	
3. <u>Phyla nodiflora</u>	<u>3</u>	<u>—</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<b>Woody Vine Stratum (Plot size: <u>ϕ</u> )</b> <u>102</u> = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				<b>Remarks:</b> (If observed, list morphological adaptations below).
<u>Dense Bermuda grass all around retention pond. mowed and well-maintained.</u> <u>Bermuda grass extending to edge of pond.</u>				

## SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	100	—	—	—	—	clay/loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
☐ (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12) (LRR T, U)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: φ  
 Depth (inches): φ

Hydric Soil Present? Yes ☐ No ☒

## Remarks:

Point south of Casino near smoke shop.

Point taken on maintained, grassy bank on the north side of the linear, rectangular retention pond.

NO hydric soil indicators present, overall sandy dark soil, possible organic topsoil added to support grasses.

Fails to meet criteria for S7 - Dark surface indicator as well as other hydric soil indicators.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seminole Coconut Creek Casino City/County: Broward County Sampling Date: 9/15/10  
 Applicant/Owner: Seminole Tribe State: FL Sampling Point: 4  
 Investigator(s): Jessica Griggs Section, Township, Range: S18, T48S, R42E  
 Landform (hillslope, terrace, etc.): retention pond Local relief (concave, convex, none): concave Slope (%): N/A  
 Subregion (LRR or MLRA): LRR-U Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: PAB4HX

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation NO, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>(man-made)</u> <u>Point taken inside linear retention pond on south side of existing casino on Tract 65 - trust land.</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) (LRR U) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____		<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-15/20 ft</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>N/A</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-4</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u>Retention pond visible on aerial imagery</u>		
Remarks: <u>Like sample point 3, NWI (1984) classification PAB4HX = Palustrine Aquatic Bed, Floating vascular, permanently flooded, excavated</u> <u>NO floating vascular plants present in retention pond.</u> <u>White 5" pipe visible on surface for intake for irrigation water used to irrigate landscaping on-site.</u> <u>"Literal zone" of sand placed approx 3ft along inside edge of retention pond.</u> <u>Pond approx 10-20 ft deep. No vegetation present within, only few herbaceous plants found along edges.</u> <u>This retention pond is man-made as a stormwater storage/flood control basin.</u>		

**VEGETATION** – Use scientific names of plants.

Sampling Point: 4

Tree Stratum (Plot size: <u>ϕ</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.														
_____ = Total Cover																		
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_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														
_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover																		
_____ = Total Cover																		

Remarks: (If observed, list morphological adaptations below).

Gravel layer 1-2 inches deep within 3 ft surrounding north edge of retention pond. Point taken in surface water of pond.  
only two species present near sample point - *Dioclea v.* & *Najas g.* (above).



Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	—	—	—	—	—	—	—	gravel layer
2-4	10YR 5/1	85	—	—	—	—	sandy	} within literal zone 3 ft from bank
2-4	7.5YR 4/1	15	—	—	—	—	sandy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
☐ (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12) (LRR T, U)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: φ  
 Depth (inches): φ

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

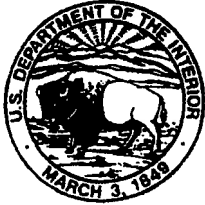
## Remarks:

Sample taken 3 ft inside retention pond in standing water.  
 No redox features present. sparse vegetation. Sample taken  
 within man-made "literal zone" of sand/gravel deposited within  
 1-4 ft of edge of retention pond. created after construction of  
 existing Casino.

## ***APPENDIX E***

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***U.S. FISH AND WILDLIFE SERVICE CONSULTATION LETTERS,  
DATED OCTOBER 31, 2005 AND AUGUST 15, 2011***



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960



October 31, 2005

Calvin L. Pell  
Seminole Tribe of Florida  
6300 Stirling Road  
Hollywood, Florida 33024

Service Log No.: 4-1-04-PL-13014  
Date Received: August 15, 2005  
Project: Hard Rock Casino, Coconut Creek  
Seminole Indian Reservation  
County: Broward

Dear Mr. Pell:

Thank you for your letter of August 11, 2005 requesting the Fish and Wildlife Service's (Service) assistance in determining if listed species occur on or near your project site. This letter represents the Service's response to your request in accordance with section 7 of the Endangered Species Act of 1973, as amended (87 stat. 884; 16 U.S.C. 1531 *et seq.*), and the provisions of the Fish and Wildlife Coordination Act of 1958, as amended (48 Stat. 401; 16 U.S.C. 661 *et seq.*). This letter provides technical assistance on the Hard Rock Casino project.

### PROJECT DESCRIPTION

The Seminole Tribe of Florida has requested information regarding potential occurrences of federally protected species on or near the proposed Hard Rock Casino project site. The project is located in Section 18, Township 48 South, Range 42 East, Broward County, Florida.

### THREATENED AND ENDANGERED SPECIES

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species, and critical habitats on or adjacent to the site specified in Broward County. The GIS database is a compilation of data received from several sources. The Service has not conducted a site inspection to verify species occurrence or validate the GIS results.

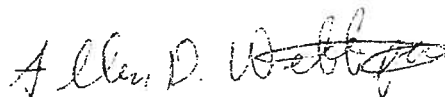
No federally listed species or critical habitat were identified on the proposed project site; however, our records indicate the project occurs within the core foraging area (CFA) (within 18.6 miles) of six wood stork (*Mycteria americana*) nesting colonies. It is not clear based on the information provided if the project involves impacts to habitat suitable for wood storks. The wood stork typically utilizes freshwater marshes, ponds, ditches, tidal creeks and pools, impoundments, pine/cypress depressions, and swamp sloughs for foraging. They forage most effectively in shallow-water areas with highly concentrated prey, such as wetland depressions subject to seasonal drying.

The Service believes loss of wetlands within a CFA may reduce foraging opportunities for wood storks and thus, recommends that wetland impacts be avoided. If avoidance is not feasible, then the Service recommends that impacts be minimized and that wetland habitat lost due to the action be replaced. Any wetlands offered as compensation should be of the same hydroperiod and located within the CFA of the affected wood stork colonies.

Although the Service found no records of federally listed threatened or endangered species, or critical habitat on the site specified in your letter, the Service assumes that listed species occur in suitable ecological communities and recommends site surveys to determine the presence or absence of listed species. Ecological communities suitable for listed species can be found in the species accounts in the *South Florida Multi-Species Recovery Plan* (Service 1999). This document is available on the internet at <http://verobeach.fws.gov/Programs/Recovery/vhms5.html>.

Thank you for the opportunity to comment. If you have any questions, please contact Mary Peterson by return email ([mary\\_peterson@fws.gov](mailto:mary_peterson@fws.gov)) or by phone at 772-562-3909, extension 327.

Sincerely yours,



James J. Slack  
Field Supervisor  
South Florida Ecological Services Office

#### LITERATURE CITED

U.S. Fish and Wildlife Service. 1999. South Florida multi-species recovery plan.  
Atlanta, Georgia.





# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960



August 15, 2011

Kurt Chandler  
Bureau of Indian Affairs  
Eastern Regional Office  
545 Marriott Drive, Suite  
Nashville, Tennessee 37214

REGIONAL DIRECTOR  
BIA-ERO

2011 AUG 18 P 12:09

RECEIVED

Service Federal Activity Code: 41420-2011-CPA-0231  
Service Consultation Code: 41420-2011-I-0260  
Date Received: July 7, 2011  
Project: Seminole Coconut Creek  
Fee to Trust  
Applicant: Bureau of Indian Affairs  
County: Broward

Dear Mr. Chandler:

The U.S. Fish and Wildlife Service (Service) has reviewed the letter dated July 6, 2011, and other information submitted by the Bureau of Indian Affairs (BIA) for the project referenced above. This letter is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). Our review and this letter are based on Alternative A, the BIA's recommended plan (tentatively selected alternative).

## PROJECT DESCRIPTION

The Seminole Tribe of Florida (Tribe) is proposing to bring approximately 45 acres of land currently owned by the Tribe into Federal Trust for the development of a resort hotel, retail and commercial space, convention center, 2,500-seat showroom, a seven-story 4,800-space parking structure, and associated facilities. Current land uses at the project site include paved parking areas, roads, and retention ponds. There are two retention ponds for storm water collection on the east and south portions of the site. Four additional retention ponds surround the northern parking lot and northern boundary of the project site. The southwest corner of the project site is bounded by Sample Road and Highway 441. This area is currently a paved parking lot. A commercially developed area outside of the project site to the south contains a car dealership.

The BIA's recommended plan includes the reconfiguration of on-site retention ponds, which will result in 2.19 acres of impacts to the ponds. The project will also result in impacts to 0.23 acre of a man-made seasonal wetland, which will be converted into part of the reconfigured retention pond in front of the casino.





The project site is located at latitude 26.2775, longitude -80.1992, in Section 18, Township 48 South, Range 42 East, in Broward County, Florida.

#### Consultation History

On August 15, 2005, the Service received a technical assistance request from the BIA for help determining if listed species occurred on or near the proposed project site.

On October 31, 2005, the Service responded that we had no records for listed species or designated critical habitat on the proposed site, but that the site was within the core foraging area (CFA) of the endangered wood stork and we recommended avoidance of wetland impacts. For unavoidable wetland impacts, we recommended impacts be minimized and wetland losses be compensated.

On July 7, 2011, the Service received a letter and biological assessment (BA) from the BIA for the proposed project. The BA evaluated three project alternatives. The letter from the BIA requested our concurrence with a "may affect, not likely to adversely affect" determination for the wood stork. The letter also included some proposed conservation measures to minimize any potential adverse effects to the wood stork.

On July 18, 2011, the Service sent an email to the BIA and inquired as to which alternative was the [tentatively] selected alternative and a more detailed project description of that alternative.

On July 25, 2011, the BIA responded by email with a copy of the draft scoping report. The BIA's consultant also responded by email with a copy of a draft version of a section of the Environmental Impact Statement with the descriptions of the three alternatives. The Service then sent an email to the BIA and their consultant stating we would need to know which alternative was the [tentatively] selected alternative in order to complete our section 7 consultation and the BIA responded that Alternative A was the recommended alternative.

On August 8, 2011, the Service sent an email to the BIA requesting more specific information about the impacts to the on-site retention ponds and the man-made seasonal wetland. We also requested more specific information on the depth of the retention ponds and their potential to draw down to water levels that would support wood stork foraging.

On August 9, 2011, the BIA's consultant provided the requested information.

### **THREATENED AND ENDANGERED SPECIES**

#### Wood stork

The project site is located within the CFA (within 18.6 miles) of three active wood stork colonies, though two of those colonies have not been active since 2001. The proposed project will impact 2.19 acres of retention ponds and 0.23 acre of a man-made seasonal wetland. The



BIA believes that the on-site retention ponds do not provide foraging habitat for wood storks. The sides are sloped at 4:1, but then drop steeply to 25 to 30 feet deep. Though there is some draw down of the sloped shelf, there are no features that would trap fish in shallow areas that would be accessible to wood storks. Thus, the Service agrees with the BIA's assessment that the ponds do not provide foraging habitat for wood storks.

The 0.23-acre manmade seasonal wetland may provide foraging habitat for wood storks at certain times of the year. The BIA proposes the following conservation measures to minimize any potential adverse effects to the wood stork:

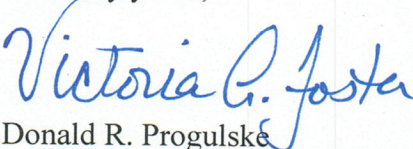
1. A pre-construction survey will be conducted by a qualified biologist prior to the start of construction to ensure that no wood storks are present within the project site.
2. Worker awareness training for the wood stork will be conducted by a qualified biologist for all construction crew members. The training will include: (1) a description of the wood stork and its habitats; (2) an explanation of the status of the species and its protection under the Act; and (3) a list of measures being taken to reduce impacts to the species during project construction. A brochure with this information will be distributed to construction personnel. In addition, a qualified biologist will be present to monitor construction activities including initial groundbreaking and periodically thereafter when new intensive construction activities are planned near or within the retention ponds.

The BIA has determined the proposed project "may affect, but is not likely to adversely affect" the wood stork. Based on the information provided by the BIA on the lack of foraging habitat on site and the proposed protection measures that will be incorporated during construction, the Service concurs with BIA's determination.

This letter fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

Thank you for your cooperation in the effort to protect federally listed species. If you have any questions on this project, please contact Mary Peterson at 772-562-3909, extension 327.

Sincerely yours,

  
for Donald R. Progulske

Acting Field Supervisor  
South Florida Ecological Services Office

cc: electronic only

Analytical Environmental Services, Sacramento, California (John Meerscheidt)  
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